

Wood-Mizer[®] Sawmill

Safety, Setup, Operation & Maintenance Manual

LT35HD

rev. A1.00 - A6.11



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

October 2010

Form #1720

California

Proposition 65 Warning



WARNING: Breathing gas/diesel engine exhaust exposes you to chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

Always start and operate the engine in a well-ventilated area.
If in an enclosed area, vent the exhaust to the outside.
Do not modify or tamper with the exhaust system.
Do not idle the engine except as necessary.

For more information go to www.P65warnings.ca.gov.



WARNING: Drilling, sawing, sanding or machining wood products can expose you to wood dust, a substance known to the State of California to cause cancer. Avoid inhaling wood dust or use a dust mask or other safeguards for personal protection.

For more information go to www.P65Warnings.ca.gov/wood.

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Wood-Mizer
8180 West 10th Street
Indianapolis, Indiana 46214

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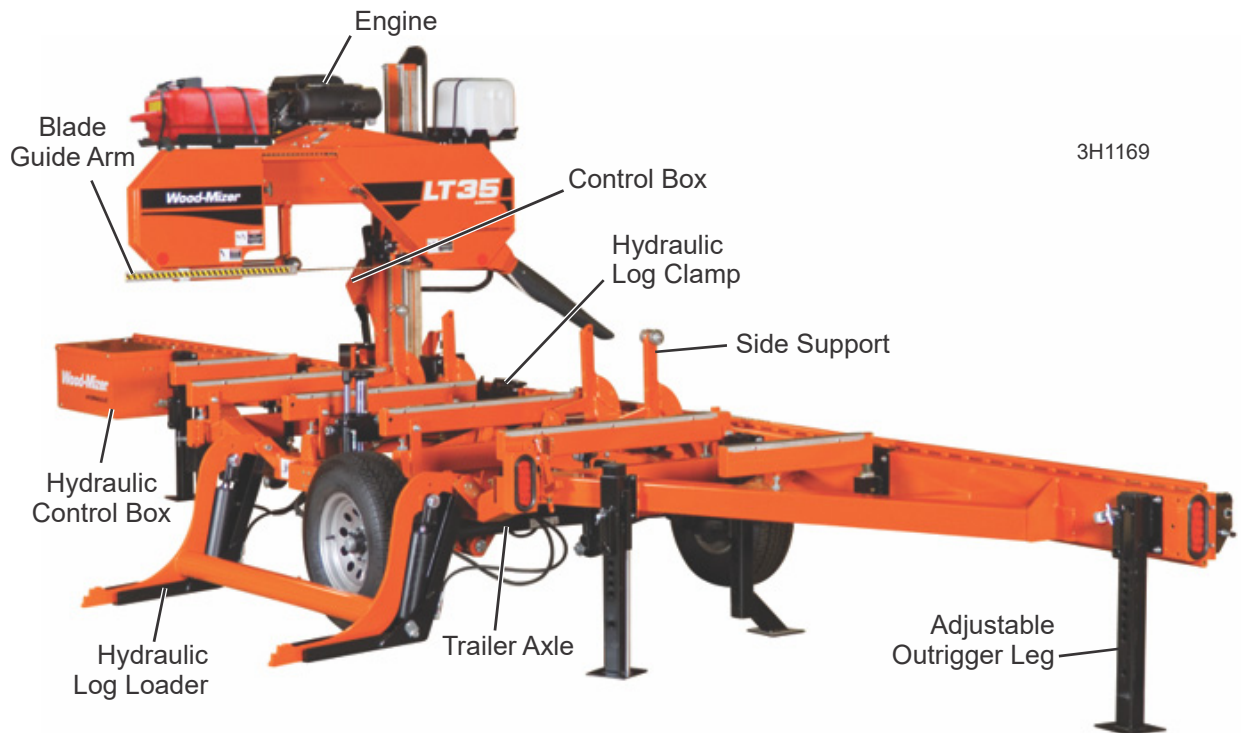
SECTION 1 INTRODUCTION

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 LLC.

1.2 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 more 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	Indianapolis Office ONLY Saturday	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.

Wood-Mizer Locations

USA World Headquarters	Canadian Headquarters
<p><i>Serving North & South America, Oceania, East Asia</i></p> <p>Wood-Mizer LLC 8180 West 10th Street Indianapolis, IN 46214</p> <p>Phone: 317.271.1542 or 800.553.0182 Customer Service: 800.525.8100 Fax: 317.273.1011 Email: infocenter@woodmizer.com</p>	<p><i>Serving Canada</i></p> <p>Wood-Mizer Canada 396 County Road 36, Unit B Lindsay, ON K9V 4R3</p> <p>Phone: 705.878.5255 or 877.357.3373 Fax: 705.878.5355 Email: ContactCanada@woodmizer.com</p>
Brazilian Headquarters	European Headquarters
<p><i>Serving Brazil</i></p> <p>Wood-Mizer do Brasil Rua Dom Pedro 1, No: 205 Bairro: Sao Jose Ivoti/RS CEP:93.900-000</p> <p>Tel: +55 51 9894-6461/ +55 21 8030-3338/ +55 51 3563-4784 Email: info@woodmizer.com.br</p>	<p><i>Serving Europe, Africa, West Asia</i></p> <p>Wood-Mizer Industries Sp z o.o. Nagorna 114 62-600 Kolo, Poland</p> <p>Phone: +48.63.26.26.000 Fax: +48.63.27.22.327</p>
Branches & Authorized Sales Centers	
For a complete list of dealers, visit www.woodmizer.com	

1.3 Specifications

Model: LT35HD Rev. A1.00+				
Dimensions:				
	Length: 26'-4"	Metric		
	Width: 6'-6"	8.02m		
	Height (Ground To Mast): 7'	1.97m		
	Height (Max Head Position): 8'-11"	2.13m		
	Bed Height (Ground To Bed): 31 1/4"	2.7m		
	Blade Length: 158"	0.79m		
		4.01m		
Weights:				
	G25			
	Basic Unit with Trailer(with heaviest power option):	3252 lbs	1475kg	
	Tongue Weight:	197 lbs	89.3kg	
Trailer:				
	Axle Capacity:	3500 lbs	1587kg	
	Tire Capacity:	1870 lbs	848.2kg	
	Tire Size:	ST215/75R14		
Cutting Capacity:				
	Length:	21'	6.4m	
	Diameter:	32"	0.81m	
	Maximum Log Weight:	4400 lbs	1995kg	
	Max Clamp Width (from stop block):	26"	0.66m	
	Max Throat Width (guide to guide):	26"	0.66m	
	Max Cant Width (outer guide to stop block):	22 1/2"	0.57m	
	Min. Cut Height:	1"	25.4mm	
	Max. Cut Height:	32 1/2"	0.82m	
	Maximum Throat Depth:	10 1/2"	0.26m	
Power Unit:				
		G25	D17	D24
	Manufacturer:	Kohler	Kohler	Yanmar
	Fuel:	gas	Diesel	Diesel
	Horsepower Rating*:	23.5	15.4	23.87
	Weight (lbs)*:	94	145.4	200
	Cooling System*:	air	water	water
	Noise Level (dba)*:	96-103(@3000 rpm)	78 (At 23ft (7m) in an open field at 3600rpm*)	92 (At 25ft in an open field at 3600rpm*)
			.54 (Full Load, @1800 rpm)	
			.43 (75% Load, @1800 rpm)	
			.32 (50% Load, @1800 rpm)	
			.19 (25% Load, @1800 rpm)	1.5 (Full Load, @3600 rpm)
	Fuel Consumption(gallon/hour)*:	1.5-2	1.10 (Full Load, @3600 rpm)	
			.87 (75% Load, @3600 rpm)	
			.66 (50% Load, @3600 rpm)	
			.39 (25% Load, @3600 rpm)	
	Engine Oil & Type*:			
	Engine Oil Capacity w/Filter*:			
	Temperature Range & Oil Grades*:			
	Coolant Capacity*:			
Rates:				
	Max. Forward (Not Cutting):	180 ft/min		
	Reverse:	200 ft/min		
	Hourly Production (Average range w/experienced operators/average size logs):	500 bd ft/hr		

*Manufacturer's Specification

1.4 Customer and Sawmill Identification

Each Wood-Mizer sawmill has a model number and a 17-digit Vehicle Identification Number (VIN). In addition, when you pick up your mill, you will receive a customer number. These three numbers will help expedite our service to you. Please locate them now and

1 Introduction

Customer and Sawmill Identification

write them below so you have quick, easy access to them. See the following figures for model number and V.I.N. descriptions.

(To be filled in by purchaser)

Mill Model _____
 Mill VIN _____
 Customer No _____

See below for a description of the V.I.N.



VIN Plate Serial number Full revision number

MFG BY/FABRIQUÉ PAR: WOOD-MIZER, LLC 8180 W. 10th St. Indianapolis, IN
 46214-2400 U.S.A. 317/271-1542 Or 800/553-0182

VIN/NIV: 456D9271XSND A1017 **A1.01** **DATE:** 04/15/2017

GVWR/PNBV: _____
 GAWR/PNBE: _____
 TIRE SIZE/PNEU: _____
 RIM /JANTE: _____
 COLD INFL. PRESSURE/
 PRESS. DE GONF. À FROID: _____

VEHICLE TYPE/TYPE DE VÉHICULE: TRAILER/REMORQUE

THIS VEHICLE CONFORMS TO ALL APPLICABLE FEDERAL MOTOR SAFETY STANDARDS AND THOSE PRESCRIBED UNDER THE CANADIAN VEHICLE SAFETY REGULATIONS IN EFFECT ON THE DATE OF MANUFACTURE.

CE VÉHICULE EST CONFORME À TOUTES LES NORMES QUI LUI SONT APPLICABLES EN VERTU DU RÉGLEMENT SUR LA SÉCURITÉ DES VÉHICULES AUTOMOBILES DU CANADA EN VIGUEUR À LA DATE DE SA FABRICATION.

One or more patents may apply: U.S. Patent #6,655,429

Sample VIN	Company Identification Number	Weight Class	Product Designation number	Length of the Trailer	Axle count	Check Digit	Year of Manufacture (coded)	Manufacture location	Month of Manufacture	Revision Level	Sequence Number
456D9271XSND A1017	456	D	9	27	1	X	S	N	D	A1	017

V.I.N. DESCRIPTION

1.5 Warranty

Wood-Mizer® LLC
Limited Product Warranty

Wood-Mizer®

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, FS	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 ¹	One year ¹	
Moulders, Kilns	MP, SD, KD	One year	One year	
Pallet Dismantler	PD	One year	One year	
Log Splitter	FS	One year	One year	
Replacement Parts	Various	90 days	90 days	

¹ 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

1 Introduction

Warranty

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, and/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 repair or replace 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 AND 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 any other basis, for any legal action against Warrantor. There are no other representations, promises, agreements, covenants, warranties, guarantees, stipulations or conditions, expressed or implied, by Warrantor, except as expressly set forth herein. THE 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, therefore 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 that is signed by both Warrantor and Purchaser.

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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.

2.2 Safety Instructions

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.

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



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 follow this may result in serious injury or death.



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



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



WARNING! Some woods require respiration protection when operating the sawmill. It is the sawyer's responsibility to know which woods require respiration protection.



KEEP SAWMILL AND AREA AROUND SAWMILL CLEAN



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

HANDLE FUEL/LUBRICANTS SAFELY



DANGER! Do not smoke, weld, grind or allow sparks near your engine or storage tanks, especially during times of fueling. Failure to follow this will result in serious injury or death.



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



WARNING! Store gasoline away from sawdust and other flammable materials. Failure to follow this may result in serious injury or death.



WARNING! Use ONLY water and Wood-Mizer Lube Additive with the water lube accessory. Never use flammable fuels or liquids such as diesel fuel. If these types of liquids are necessary to clean the blade, remove it and clean with a rag. Failure to follow this could 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 (ENGINES ONLY)






DANGER! Batteries expel explosive gases; keep sparks, flames, burning cigarettes, or other ignition sources away at all times. Failure to follow this will result in serious injury or death.



WARNING! Always wear safety goggles and a face shield when working near batteries. Failure to follow this could result in serious injury or death.





WARNING! Wash hands after handling batteries to remove possible lead, acid, or other contaminants. Failure to follow this could result in serious injury or death.


- 
WARNING! Charge the battery in a well ventilated area. Failure to follow this could result in serious injury or death.
- 
WARNING! Do not attempt to charge a frozen battery. Failure to follow this could result in serious injury or death.
- 
IMPORTANT! When working with batteries, use extreme care to avoid spilling or splashing electrolyte (dilute sulfuric acid) as it can destroy clothing and burn the skin.

EMERGENCY TREATMENT FOR CONTACT WITH BATTERY COMPONENTS (LEAD/SULFURIC ACID) per SDS (Safety Data Sheet):

EYE CONTACT	Sulfuric Acid and Lead: Flush eyes immediately with large amounts of water for at least 15 minutes while lifting lids. Seek immediate medical attention if eyes have been exposed directly to acid.
SKIN CONTACT	Sulfuric Acid: Flush affected area(s) with large amounts of water using deluge emergency shower, if available, shower for at least 15 minutes. Remove contaminated clothing, including shoes. If symptoms persist, seek medical attention. Wash contaminated clothing before reuse. Discard contaminated shoes. Lead: Wash immediately with soap and water.
INGESTION	Sulfuric Acid: Administer large amounts of water. Do NOT induce vomiting or aspiration into the lungs may occur and can cause permanent injury or death; consult physician.
INHALATION	Sulfuric Acid: Remove to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Consult a physician. Lead: Remove from exposure, gargle, wash nose and lips; consult physician.

- 
CAUTION! Do not overcharge the battery. Overcharging could 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.

CAUTIONS FOR SAWMILL SETUP

- 
WARNING! Do not set up the mill on ground with more than a 10 degree incline. Failure to follow this could result in serious injury or death.

If setup on an incline is necessary, put blocks under one side of the mill or dig out areas for the outrigger legs to keep mill level. Setting up the mill on an incline could cause it to tip over.



WARNING! Chock the trailer wheels to prevent movement before unhitching it from the towing vehicle. Failure to follow this could result in serious injury or death.



WARNING! Put front outrigger down before moving saw head from the rest position. Failure to follow this could result in serious injury or death.



WARNING! Always make sure the trailer is supporting the sawmill frame when operating a sawmill with adjustable outriggers. Failure to follow this could result in serious injury or death. The adjustable outriggers are intended to support the saw frame with assistance from the trailer.



WARNING! The adjustable outriggers supplied with portable sawmills are not intended for setup on concrete or other hard surfaces. Long-term use of the adjustable outriggers on hard surfaces could cause the outriggers to fail. If setting the sawmill up on concrete or other hard surface, replace the adjustable outrigger legs with stationary legs. Failure to follow this could result in serious injury or death.



WARNING! Securely fasten the feet of a stationary sawmill to the floor before operating the sawmill. Failure to follow this could result in serious injury or death.

CHECK SAWMILL BEFORE OPERATION



DANGER! Ensure the blade housing and pulley covers are in place and secure. Failure to follow this could result in serious injury or death.



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





DANGER! Do not use blades with stress cracks. Failure to follow this could result in serious injury or death.




WARNING! Use both hands to operate the blade tensioner handle. Be sure the handle lock engages (flips down) after tensioning the blade. Failure to follow this could result in serious injury or death.

KEEP PERSONS AWAY


 **DANGER!** Stay clear of the area between the trailer axle and saw carriage. Failure to follow this will result in serious injury or death.


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


 **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 follow this will result in serious injury or death.





KEEP HANDS AWAY


 **DANGER!** Always disengage the blade and shut off the sawmill engine before changing the blade. Failure to follow this will result in serious injury or death.

 **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 follow this will result in serious injury or death.

 **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 serious injury or death.

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

 **WARNING!** Always disengage the clutch/brake mechanism whenever the sawmill is not cutting. Failure to follow this could result in serious injury or death.





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



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

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.

KEEP SAFETY LABELS IN GOOD CONDITION



IMPORTANT! Inspect all safety decals to ensure they 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 follow this could result in serious injury or death.



WARNING! Always leave hydraulic loading arm halfway up while log is on sawmill bed. Failure to follow this could 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 could 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 could fall, causing severe injury or death.

GENERAL TRAILER SAFETY



DANGER! Make sure your hitch has adequate safety chain hookups. Do not use eyebolts for safety chain hook-up. Safety chains should be hooked to bumper of vehicle so that each chain would pull the trailer equally in the event the hitch became disengaged. Failure to follow this will result in serious personal injury and/or severe machine damage.



DANGER! Be sure that the hitch and safety chains are secure before towing the sawmill. Failure to follow this will result in serious personal injury and/or severe machine damage.



DANGER! Make sure all light connections have been made and are working properly before towing the sawmill. Failure to follow this will result in serious personal injury and/or severe machine damage.



WARNING! The trailer option is designed for the express purpose of towing the sawmill it is supplied with. Do not make modifications or additions that affect the weight and/or stability of the towing unit. Doing so could result in property damage and/or serious injury or death.



WARNING! Always check trailer tires for proper inflation before towing sawmill. Failure to follow this could lead to tire failure resulting in property damage and/or serious injury or death.



CAUTION! Move the hydraulic clamp and turner to provide maximum ground clearance before towing. Failure to follow this could result in damage to the sawmill.

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. Failure to follow this could result in shock, burns, or death.



WARNING! Disconnect the negative battery terminal cable before performing any service to the 12-Volt electrical system. Failure to follow this could result in injury and/or electrical system damage.



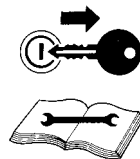
WARNING! Never assume or take the word of another person that the power is off; check it out and lock it out. Failure to follow this could result in shock, burns, or death.



WARNING! Do not wear rings, watches, or other jewelry while working around an open electrical circuit. Failure to follow this could result in shock, burns, or death.



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 or death could result.



WARNING! Remove the blade before performing any service to the engine or sawmill. Failure to follow this could result in serious injury or death.

2.3 Electrical Lockout Procedures

RULES FOR USING LOCKOUT PROCEDURE

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

LOCKOUT PROCEDURES MUST BE USED DURING:

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

MAINTENANCE HAZARDS INCLUDE:

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

FAILURE TO LOCKOUT MAY RESULT IN:

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

TO CONTROL MAINTENANCE DANGERS:

- Lockout procedures must be followed (see 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 per OSHA regulation 1910.147, appendix A:

GENERAL

The following simple lockout procedure is provided to assist owner/operators in developing their procedures so they meet the requirements of OSHA regulation 1910.147. When the energy isolating devices are not lockable, tagout may be used, provided the owner/operator complies with the provisions of the standard which require additional training and more rigorous periodic inspections. When tagout is used and the energy isolating devices are lockable, the owner/operator must provide full operator protection (see OSHA regulation 1910.147, paragraph (c)(3)) and additional training and more rigorous periodic inspections are required. For more complex systems, more comprehensive procedures may need to be developed, documented, and utilized.

PURPOSE

This procedure establishes the minimum requirements for the lockout of energy isolating devices whenever maintenance or servicing is done on machines or equipment. It shall be used to ensure that the machine or equipment is stopped, isolated from all potentially hazardous energy sources and locked out before personnel perform any servicing or maintenance where the unexpected energization or start-up of the machine or equipment or release of stored energy could cause injury.

COMPLIANCE WITH THIS PROGRAM

All personnel are required to comply with the restrictions and limitations imposed upon them during the use of lockout. The authorized personnel are required to perform the lockout in accordance with this procedure. All operators, upon observing a machine or piece of equipment which is locked out to perform servicing or maintenance shall not attempt to start, energize, or use that machine or equipment.

SEQUENCE OF LOCKOUT

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

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



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

8. The machine or equipment is now locked out.

RESTORING EQUIPMENT TO SERVICE

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

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

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

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



IMPORTANT! 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.**

SECTION 3 SAWMILL SETUP

3.1 Stationary Sawmill Setup

Prepare the site:

- Area must be firm and level.
- The cement pad should be rated to support 6350 lbs./sq.ft.
- Use 5/8" diameter anchor bolts to secure feet.
- Allow maneuvering room for operators, sawdust removal, log loading, and board removal.

[See Form #847](#) for stationary sawmill foot anchor locations. [See Form #359](#) for stationary sawmill with bed extension foot anchor locations.

NOTE: Make sure the unit is level before securing. It **IS POSSIBLE** to twist the mill frame by jacking one foot higher than the others.



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

1. Unhook the carriage safety chain, located at the bottom of the vertical mast.

See Figure 3-1.

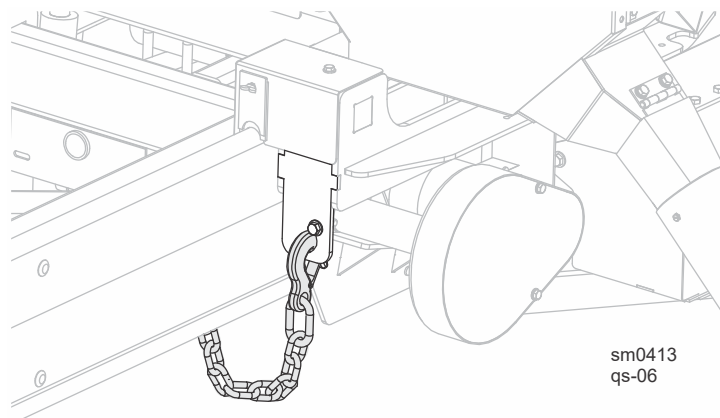


FIG. 3-1

See **Figure 3-2**. Release the fender straps and lift up to remove the fenders. Stow until needed for transport..

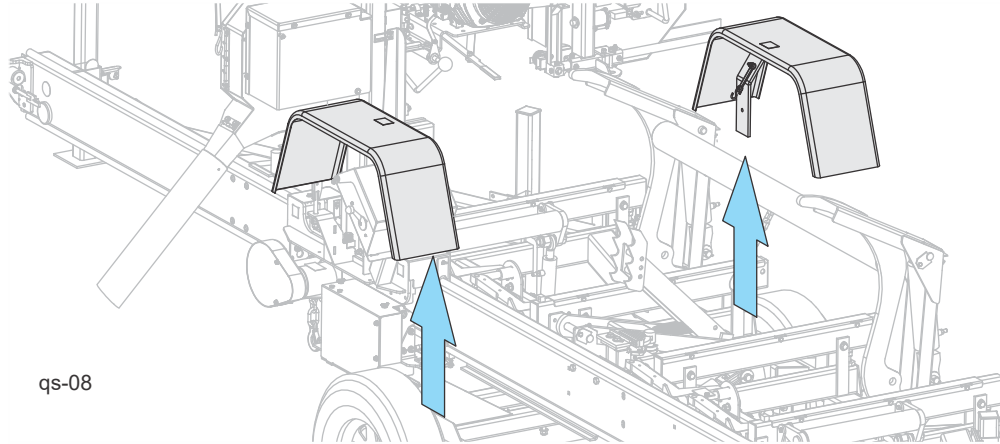


FIG. 3-2

2. Start the engine to enable the battery-operated accessories ([See Section 3.6](#)). Use the up/down switch on the control panel to raise the cutting head from the carriage rest pin.

See **Figure 3-3**.

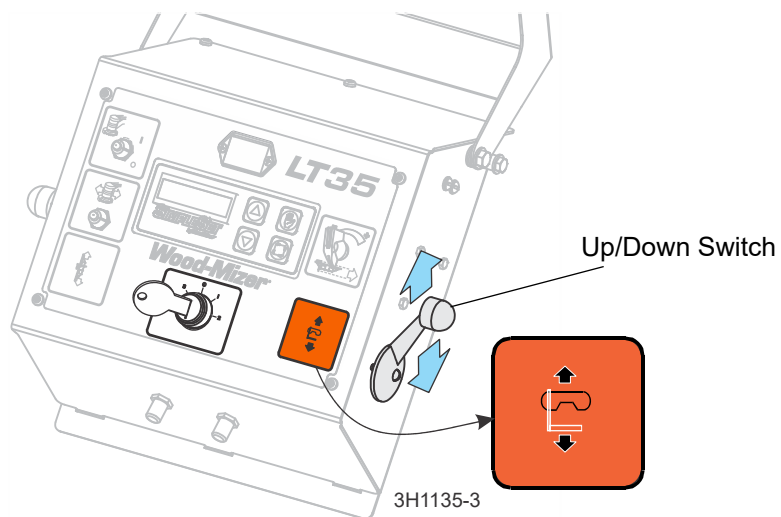


FIG. 3-3

3. Remove the locking pin and swing the rest pin down below bed level.

See Figure 3-4.

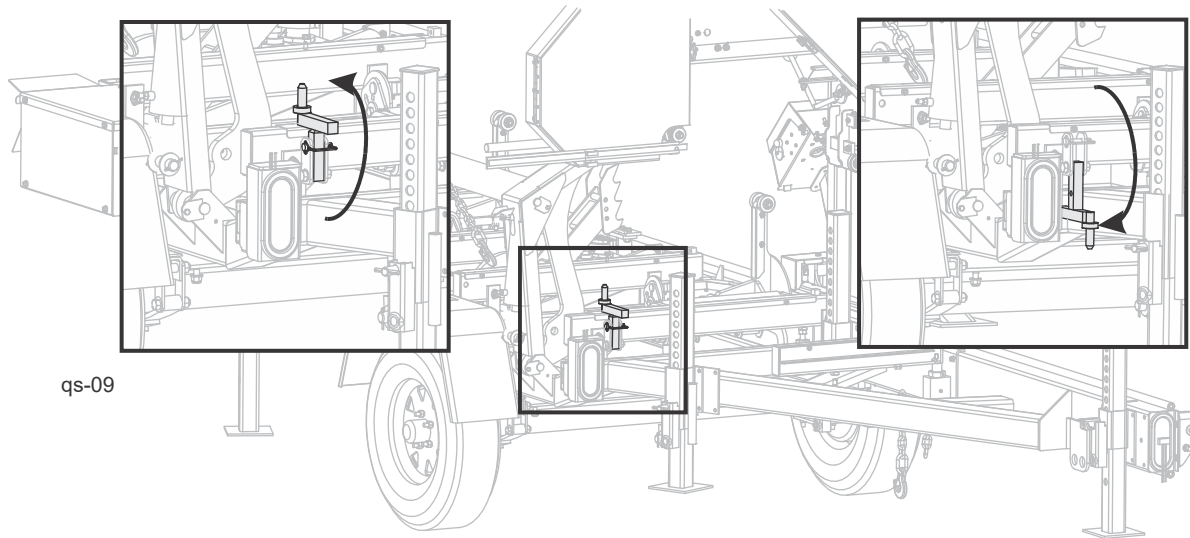


FIG. 3-4

NOTE: Always make sure the engine is running before operating the sawmill controls. Operating the controls without the engine running will result in power drainage from the battery.

4. Use the carriage forward/reverse switch (left side of control box) to move the cutting head toward the front (hitch end) of the mill.
5. Raise the side supports to prevent a log from falling off the side of the mill when loaded.

See Figure 3-5.

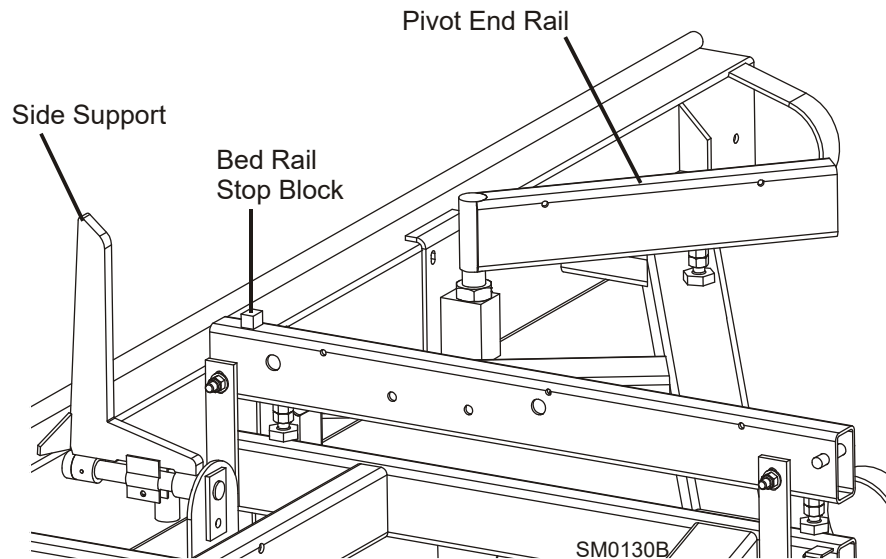


FIG. 3-5

3.2 Portable 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 outrigger legs to keep mill level. Setting up the mill on an incline could cause it to tip over, resulting in serious personal injury.

WARNING! Chock the trailer wheels to prevent movement before unhitching it from the towing vehicle. Failure to do so may result in serious injury or death.

WARNING! Always make sure the trailer is supporting the sawmill frame when operating a sawmill with adjustable outriggers. Failure to do so may result in serious injury or death. The adjustable outriggers are intended to support the saw frame with assistance from the trailer.

WARNING! The adjustable outriggers supplied with portable sawmills are not intended for setup on concrete or other hard surfaces. Long-term use of the adjustable outriggers on hard surfaces may cause the outriggers to fail, causing the sawmill to drop. This could result in possible serious injury or death.

If setting the sawmill up on concrete or other hard surface, replace the adjustable outrigger legs with stationary legs.

3

Sawmill Setup

Portable Sawmill Setup

1. Unhitch the mill from the vehicle.
2. Lower and set the front three outriggers. To lower, use the provided jack handle to lift the weight from the locking pin. If necessary, rotate the locking pin counterclockwise so that the inner roll pin is free from the outrigger channel notch, then pull the locking pin out to release the outrigger. Lower the outrigger as necessary. Push the locking pin back in and turn clockwise until the inner roll pin is behind the outrigger channel notch to “lock” the outrigger in place.



WARNING! Put front outrigger down before moving cutting head from the rest position. Failure to do so may result in serious injury.

See Figure 3-6.

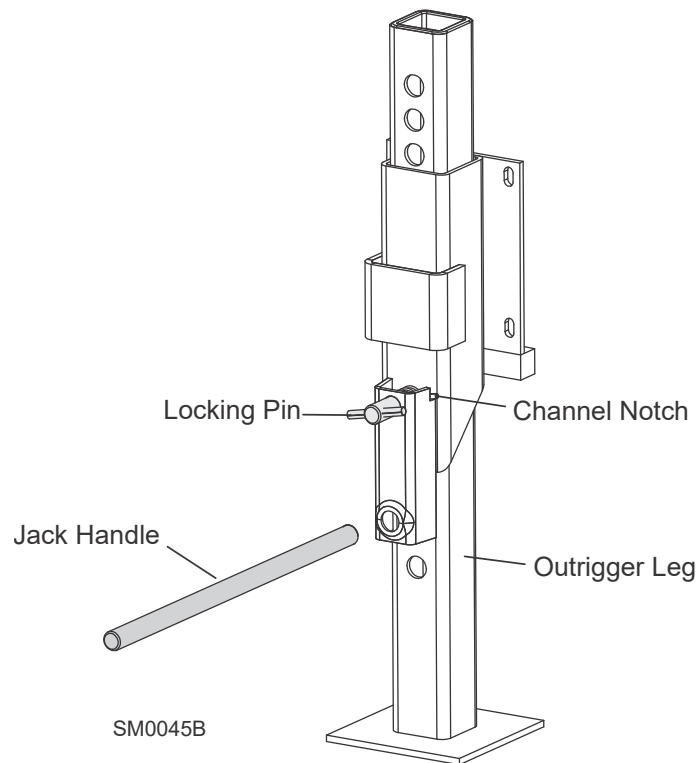



FIG. 3-6. OUTRIGGER ADJUSTMENT.


If sawmill is equipped with optional Fine Adjust Outriggers (FAO), see the option manual for outrigger operation.

3. Unhook the carriage safety chain, located at the bottom of the vertical mast.
4. Start the engine to enable the battery-operated accessories ([See Section 3.6](#)). Use the up/down switch on the control box to raise the cutting head from the carriage rest pin. Remove the locking pin and swing the rest pin down below bed level.




 **CAUTION!** Always make sure the engine is running before operating the sawmill controls. Operating the controls without the engine running will result in power drainage from the battery.

5. Remove the fenders by lifting them out of the slots.

 **CAUTION!** To prevent fender damage, remove fenders before operating sawmill or loading logs.

6. Use the feed control switch (left side of control box) to move the cutting head toward the front end of the mill.
7. Lower and set the remaining rear outriggers. Level the sawmill by adjusting the outriggers to raise or lower each end of the sawmill. Adjust all outriggers evenly to avoid twisting the mill frame by jacking one outrigger higher than the others.

For FAO(s), fine tune the outrigger base height as necessary. Move the cutting head to the opposite end of the mill from the outrigger. Raise the entire outrigger (to remove the sawmill weight from it) and adjust the outrigger base as necessary. Lower the entire outrigger and use the locking pin to secure in position.

 **CAUTION!** Do not adjust the FAO outrigger base height while there is weight on the FAO. Damage to the FAO may result.

8. Raise the two side supports to prevent the log from falling off the side of the mill when loaded.

See Figure 3-7.

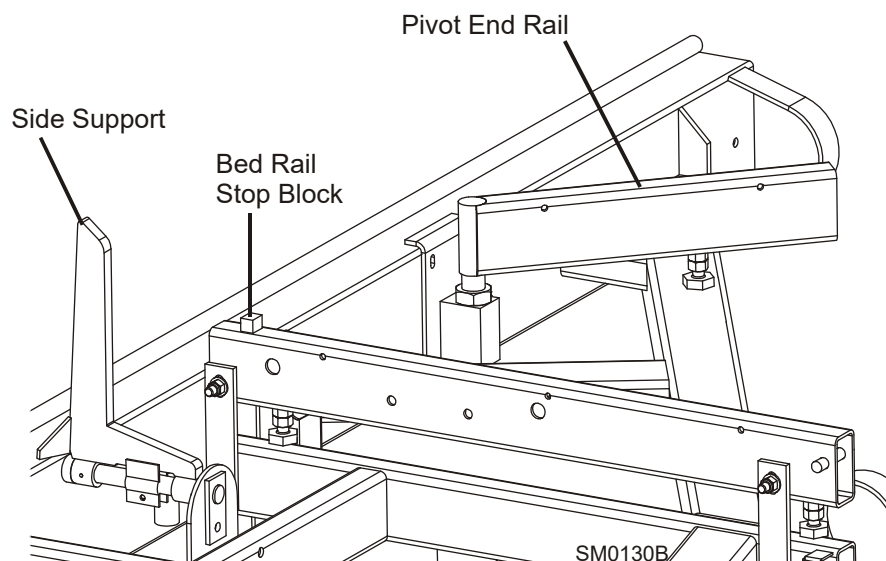


FIG. 3-7

3.3 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.

1. Open the two blade housing covers that cover the blade wheels.
2. 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.
3. Lift the blade out of the blade housing.
4. Make sure the teeth are pointing the correct direction.

See **Figure 3-8**. The cutting teeth should be pointing toward sawdust chute.

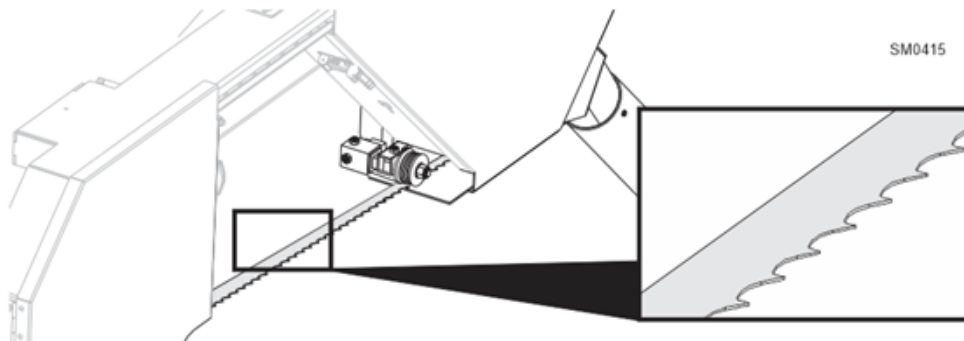


FIG. 3-8

5. Install the blade so it is lying around the wheels.
6. 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.
7. Close the blade housing covers.
8. Use the tension handle to tension the blade correctly.

3.4 Tensioning The Blade

The blade tensioner is factory-set so proper blade tension is achieved when the rubber spring is compressed 3/16" (4.8 mm). An indicator bolt is provided to indicate when the rubber spring has been compressed properly. To tension the blade, turn the blade tension handle up until it locks in place.



WARNING! Use both hands to operate the blade tensioner handle. Failure to do so may result in injury.

Check the back side of the rubber spring washer is aligned with the indicator bolt head. If not, release the blade tension and turn the tensioner shaft counterclockwise to compress the rubber spring more; clockwise to compress the rubber spring less.

See **Figure 3-9**. Use the scalloped disk to turn the tensioner shaft.

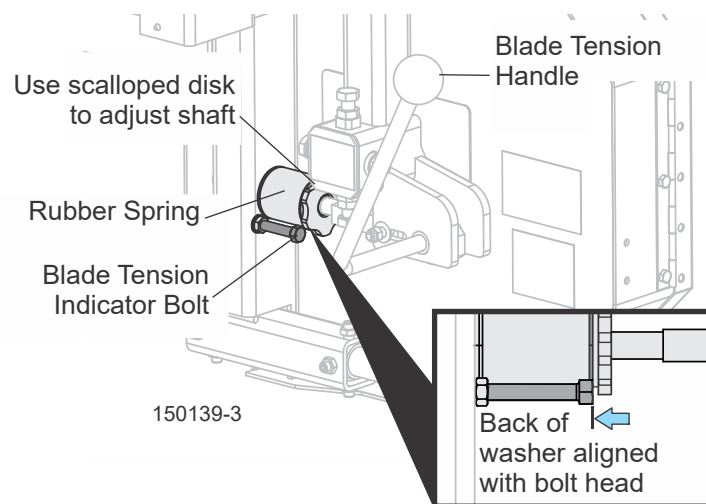


FIG. 3-9

Tension the blade and recheck the alignment of the rubber spring washer with the indicator bolt head.

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 tensioner shaft as necessary to maintain proper blade tension.

3.5 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 3-10. 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]).

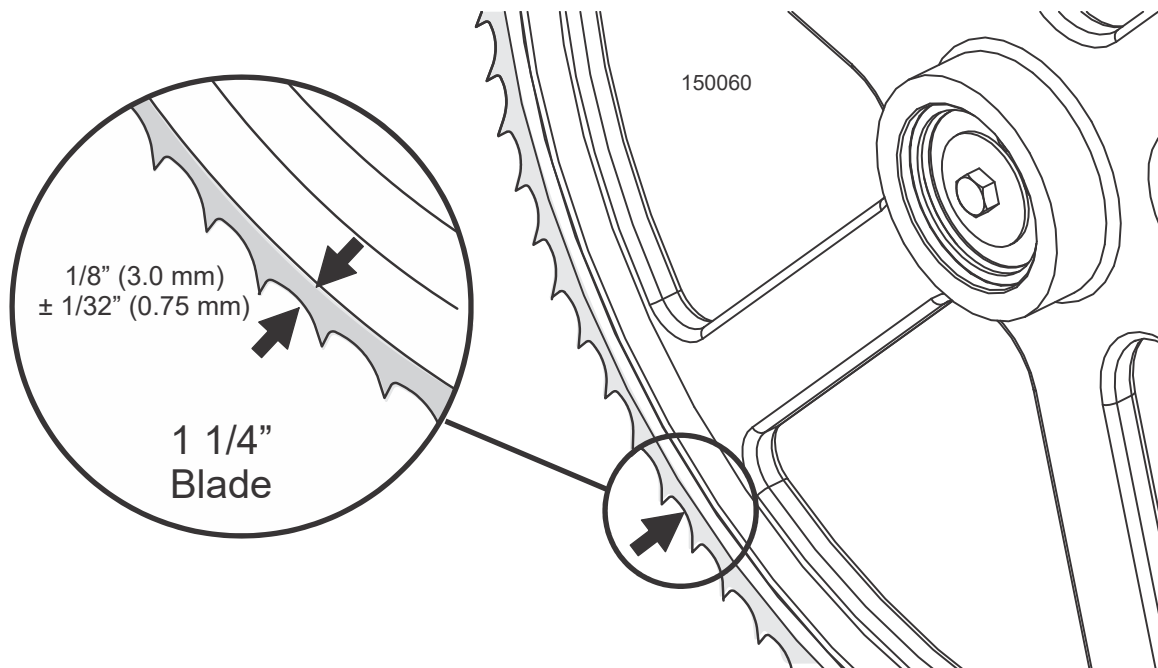


FIG. 3-10

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

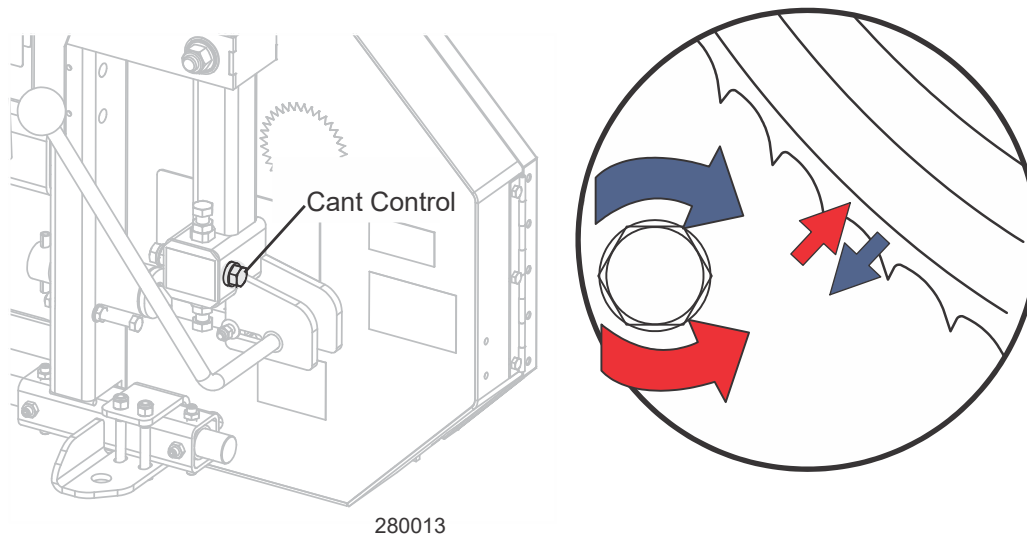




FIG. 3-11

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 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.

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

3.6 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 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.

3

Sawmill Setup

Starting The Engine

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.

WARNING! Be sure the power feed switch (if equipped) is in the neutral position before turning the key switch to the on (#1) or accessory (#3) position. This prevents accidental carriage movement which may cause serious injury or death.

SECTION 4 SAWMILL OPERATION

4.1 Hydraulic Control Operation

The hydraulic control levers become operational when the contacts at the bottom of the carriage touch the power strip on the frame tube. The hydraulic control levers will only work when the cutting head is close enough to the front end of the mill to touch the power strip.

See Figure 4-1. Hydraulic units have six control levers to load, clamp, turn and level logs.

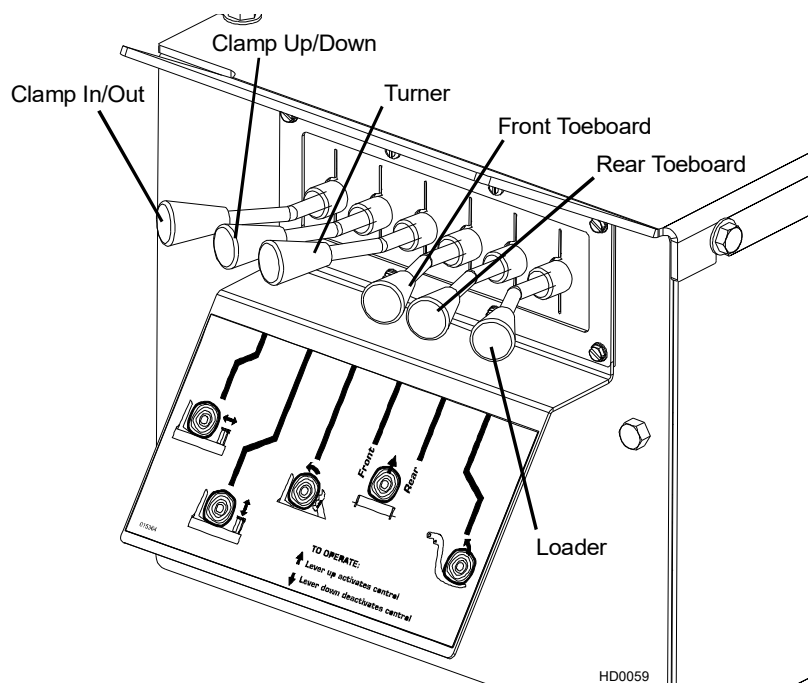


FIG. 4-1

Use the hydraulic control levers to get the mill ready to load a log.

! 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.

! CAUTION! Always make sure the engine is running before operating the hydraulic controls. Operating the controls without the engine running will result in power drainage from the battery. Holding the hydraulic switches halfway up or down also will cause excessive drainage from the battery.

4

Sawmill Operation

Hydraulic Control Operation

1. Move the clamp out and down so it will not get in the way of logs being loaded onto the bed.



Lower the clamp in/out lever to move the clamp out toward the loading side of the sawmill.



Lower the clamp up/down lever to lower the clamp below bed level.

2. Raise the log loader lever to extend the legs of the log loader out as far as they will go.



The chain securing the log loading arm to the log turner arm will be tight. Raise the log turner lever to raise the turner arm until there is slack in the chain.



4. Unchain the loading arm from the turner arm.

5. Lower the turner lever to completely lower the turner arm. Notice that after the turner arm is all the way down, the side support braces will begin to lower. Release the turner lever after the turner arm is lowered, but before the side supports begin to lower. This stops the log being loaded from damaging the turner and/or falling off the side of the sawmill.



6. When raising the turner lever, the side supports rise first. After reaching a fully vertical position, the turner arm will engage and start to rise.

7. Manually lower the log loader so it rests on the ground.



CAUTION! Be careful when manually lowering the log loader. Do not drop the loader onto the ground or perform any action which might break the velocity fuse valves on the loader cylinders. These valves control hydraulic flow and are necessary to prevent the loading arm from collapsing during use.

8. Lower the loader lever to lower the loading arm as far as it will go. Logs must be rolled onto the loading arm one at a time for loading onto the bed of the mill.



9. The front and rear toe boards should be below bed level. Once a tapered log has been loaded, the front or rear end of the log may be lifted to parallel the heart of the log to the path of the blade.



The front toe board is raised by lifting the front toe board lever up. The rear toe board is raised by lifting the rear toe board lever up. Once a flat has been made and the log is ready to be turned, push the appropriate toe board lever down to lower either toe board until it falls below the level of the bed.

4.2 Loading, Turning And Clamping Logs

TO LOAD LOGS

1. Start the engine and 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.



CAUTION! Be sure the log clamp, pivot rails, turning arm and toe boards 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 or cause misalignment.

2. Raise the side supports on the sawmill bed to prevent the log from falling off the side of the bed.
3. Use cant hooks or loading equipment to move the log to the foot of the loading arms.
4. Roll the log onto the loader so that it is approximately centered with the sawmill bed. The log turner will operate much easier if the log is centered on the sawmill bed.



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.

5. Raise the loader to lift the log onto the sawmill bed. Simply let the loader rise until the log rolls onto the mill bed.
6. Raise the clamp up to prevent the log from rolling off the bed.
7. Clamp the log and lower the loading arm. Leave the loading arm about halfway up while squaring the log. This will stop the log from rolling off the side of the mill.



WARNING! Always leave loading arm halfway up while log is on sawmill bed. Failure to do so may result in serious injury or death.

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

TO TURN LOGS

1. Engage the log turner arm. Let the arm rise until it touches the log and starts to turn it.
2. Spin the log against the side supports until it is turned the way you want it for the first cut.
3. To turn the log more, clamp the log against the side supports and lower the turner arm below the log.
4. Raise the turner arm to get a new bite on the log.
5. Disengage the clamp and continue turning the log.
6. Repeat steps 3 through 5 until the log is turned as desired.

TO TURN LOGS (OPTIONAL PROCEDURE)

If you are turning a small cant on a mill with two-plane clamp, you may opt to use the clamp to turn the cant.

1. Lower the clamp below bed level.
2. Move the clamp in, beneath the edge of the cant.
3. Raise the clamp and flip the cant.

TO CLAMP LOGS

1. Clamp the log against the side supports.
2. Lower the turner until the arm falls below the bed.
3. When the turner arm is lowered all the way, the side supports will begin to lower. Back the clamp off slightly, and let the side supports come down until they are positioned below the level of your first few cuts.

TO LEVEL A TAPERED LOG

Use the toe board lever(s) to raise either end of a tapered log, if desired.

Raise the front or rear toe board until the heart of the log measures the same distance from the bed rails at each end of the log.

4.3 Up/Down Operation

This section describes operation of the up/down system with the basic controls. [See Section 4.4](#) for Simple Set setup and operation instructions.

1. Install a blade, if needed, and check for correct blade tension. ([See Section 3.3](#)).
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 4-2. The up/down switch is located on the right side of the control panel. Use the switch to raise or lower the cutting head. Hold the switch in position until the cutting head reaches the desired height, then release.

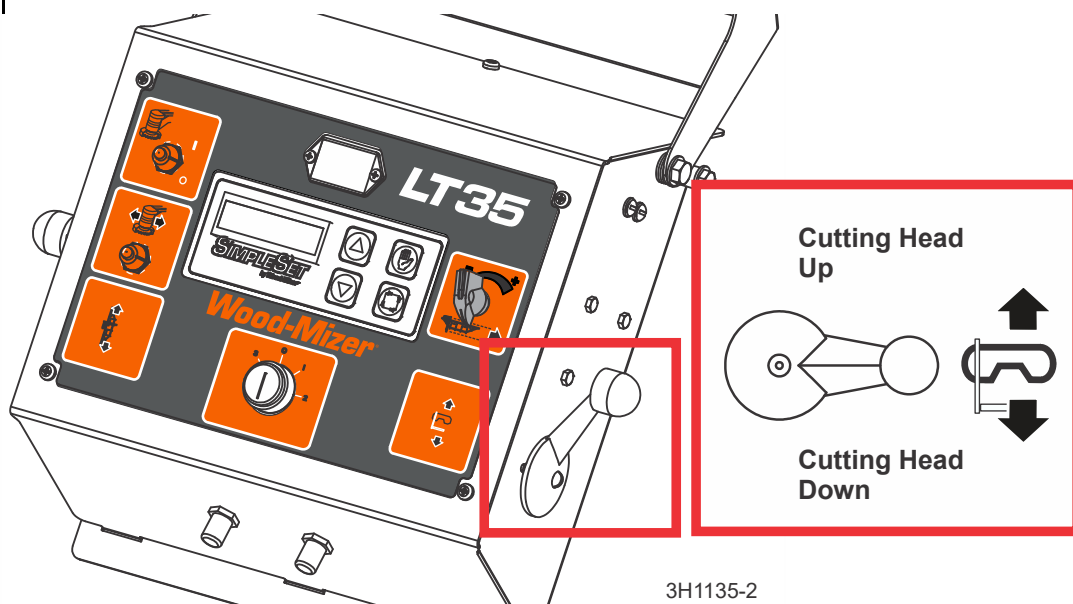


FIG. 4-2 REV. A4.00+

4

Sawmill Operation

Up/Down Operation

See Figure 4-3.

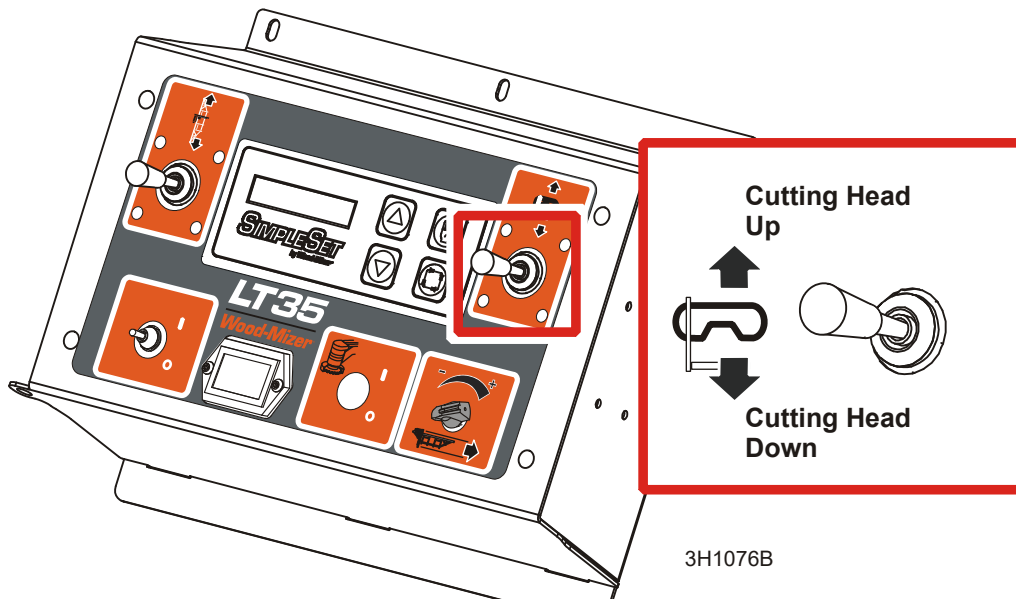


FIG. 4-3 REV. A1.00 - A3.00

The up/down switch is designed to return to the neutral or "off" position when released. If the switch remains engaged, manually move the switch to the neutral or "off" position. Repair the up/down switch



CAUTION! Always make sure the up/down switch moves to the neutral or "off" position when released to ensure that the saw head stops moving. Failure to do so may result in machine damage.



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.

4.4 Simple Set Operation

Initial Setup

See **Figure 4-4**. Turn the sawmill control key switch to the ON (#1) position. Simple Set will start up in manual mode. As the control powers up, the software revision is displayed. This information can be helpful should you require service.

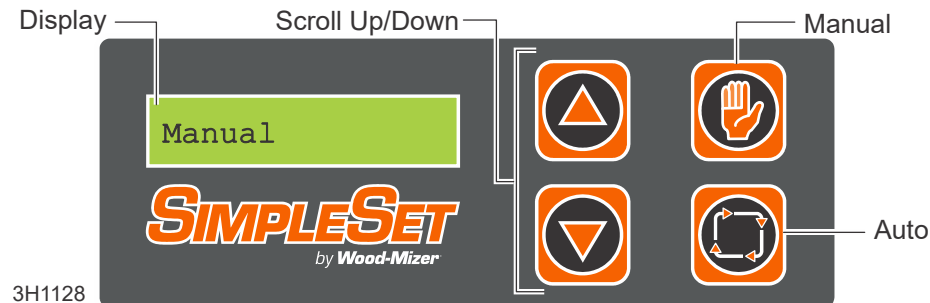




FIG. 4-0

In manual mode, press the Up  arrow to enter the setup menus.



Set Speed: Available values are 1 - 5. The default value is 5. Lowering the Set Speed will assist in achieving the desired blade height setting in situations where the up/down chain is too loose.

Use the Up  and Down  buttons to scroll to the desired Set Speed setting.



Press the Auto  button to scroll to the Units menu or the Manual  button to exit.

Units: Simple Set can display units in inches (default) or millimeters.


Push the Up or Down buttons to scroll to the desired unit setting.


Press the Auto  button to scroll to the Language menu or the Manual  button to exit.





Language: To date, the only available language is English.

Press the Auto  button to scroll back to the Set Speed menu or the Manual  button to exit.

Operation

 **Manual:** With Simple Set in manual mode, operate the sawmill up/down system as normal with the sawmill control up/down switch. The display will show a 'D' when the up/down switch is pushed down and a 'U' when pushed up.

 **Auto:** With Simple Set in auto mode, the saw head will move down the increment displayed when the sawmill control up/down switch is activated in the down position. The saw head will move up as normal when the up/down switch is activated in the up position.

- Two sets of values can be stored in the control. Push the Auto  button to toggle between Set1 and Set2.
- Use the Up  and Down  buttons to adjust the value in 1/16" (or 1mm) increments in Set1 or Set2.
- Bump the up/down switch down to move the blade to the next increment. Holding the switch up or down will bypass Simple Set and move the saw head until the up/down switch is released.
- If the saw head is raised before the next cut, bumping the up/down switch down will return the saw head to the original position **plus the increment value**.
- Push the Manual  button to exit auto mode.

Turn the sawmill control key switch to the OFF (#0) position to power off Simple Set.

4.5 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).

See Figure 4-5. Use the blade guide arm lever to adjust the outer blade guide as necessary.

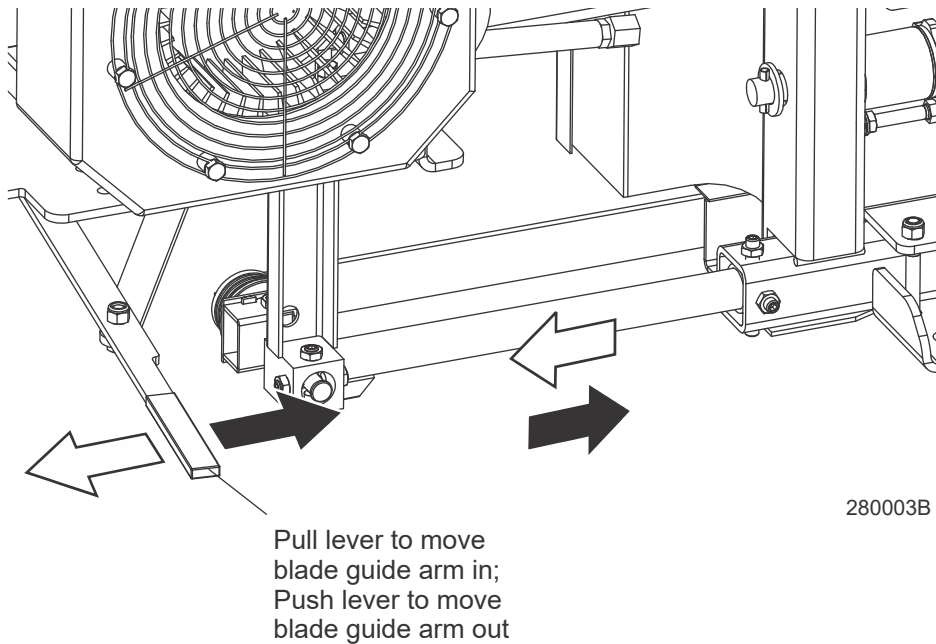


FIG. 4-5

4 Sawmill Operation

Power Feed Operation

4.6 Power Feed Operation

See Figure 4-6. The power feed system moves the carriage forward and backward by using two switches on the control panel..

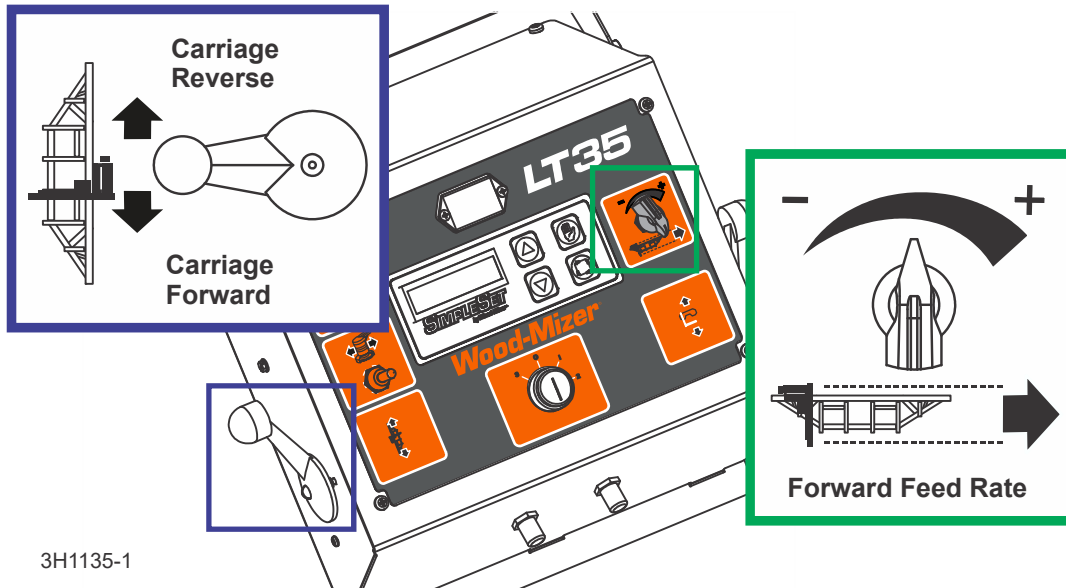


FIG. 4-6 REV. A4.00+

See Figure 4-7.

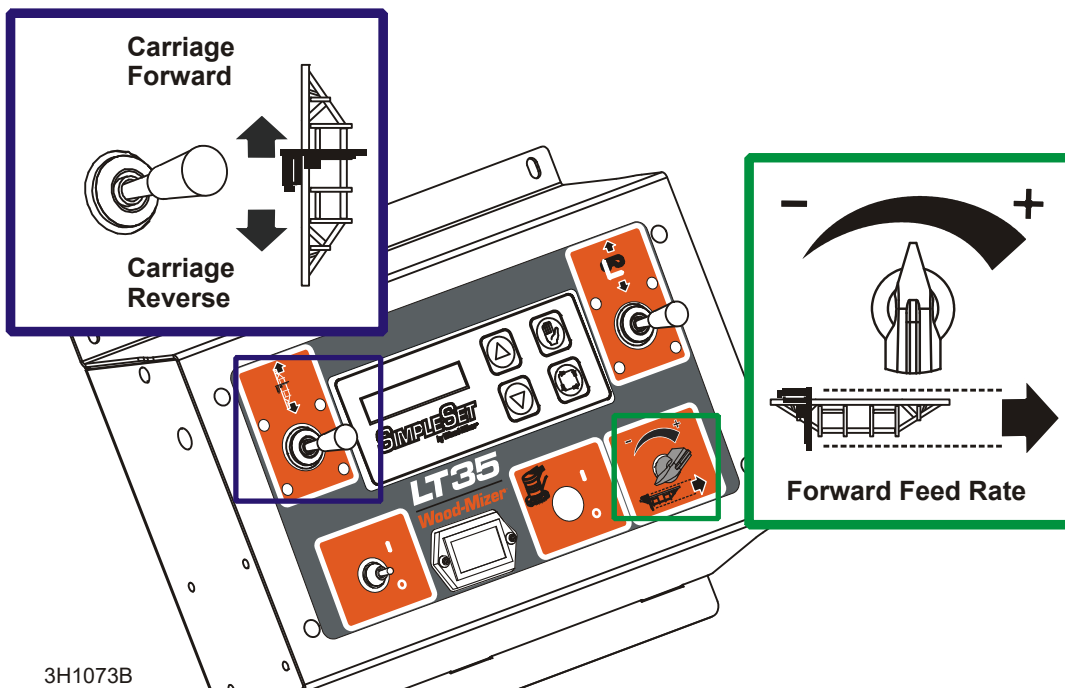


FIG. 4-7 REV. A1.00 - A3.00

CARRIAGE FEED RATE



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

CARRIAGE FORWARD AND REVERSE



The carriage forward/reverse switch controls the direction in which the carriage travels. Use the forward/reverse switch to move the carriage forward or backward.



The middle position (as shown) is the neutral position. The power feed switch is designed to return to the neutral or "off" position when released from operating in the reverse position. If the switch remains engaged, manually move the switch to the neutral or "off" position. Repair the switch ([See Section 5.6](#)).



WARNING! Be sure the power feed switch is in the neutral position before turning the key switch to the on (#1) or accessory (#3) position. This prevents accidental carriage movement which may cause serious injury or death.

USING THE POWER FEED

- To move the carriage forward, push the forward/reverse switch forward and turn the feed rate switch clockwise.



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. Turn the carriage feed rate switch to a slow speed until the whole width of the blade has entered the cut.



Then use the carriage feed rate switch to increase the feed rate as desired. Maximum feed rate varies with width and hardness of the wood. Over-feeding results in engine and blade wear, and also produces a wavy cut.

- Stop the carriage at the end of the cut by turning the carriage feed rate switch counterclockwise until the carriage stops moving. 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.**



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

Cutting The Log

- Return the carriage to the front of the mill by pushing the forward/reverse switch down. The power feed motor will bypass the carriage feed rate switch and the carriage will automatically return at the fastest speed available.



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.



DANGER! Stay clear of the area between the trailer axle and saw carriage. Failure to do so will result in serious injury.

4.7 Cutting The Log

- Once the log is placed where you want it and clamped firmly, move the saw head to position the blade close to the end of the log.

- Use the blade height scale to determine where to make your first cut ([See Section 4.9](#)). The blade height scale will help you to do this. Set the blade to the desired height with the up/down switch. Make sure that the blade will clear all side supports and the clamp. Adjust the outer blade guide to clear the widest section of the log by moving the blade guide lever.



- Engage the clutchlever to start the blade spinning.

- Start the water lube if necessary to prevent sap buildup on the blade. [See Section 4.10](#).

- Feed the blade into the log slowly ([See Section 4.6](#)). Once the blade completely enters the log, increase the feed rate as desired. Always try to cut at the fastest speed you can while keeping an accurate cut. Cutting too slowly will waste blade life and lower production!



- As you get to the end of the log, slow down the feed rate. When the teeth exit the end of the log, stop the carriage. Disengage the clutch lever. Remove the slab that you have just cut from the log.



- Use the carriage forward/reverse switch to return the carriage to the front of the mill.



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.

- Lower the toe boards, if they were used. Use the hydraulic levers to release the clamp and engage the log turner. 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 toe boards to

compensate for taper in the log, raise the front or rear toe board 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.

4.8 Edging

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

4.9 Blade Height Scale

The blade height scale is attached to the carriage head frame. It includes:

- a blade height indicator
- an inch scale
- a magnetic quarter scale

See Figure 4-8.

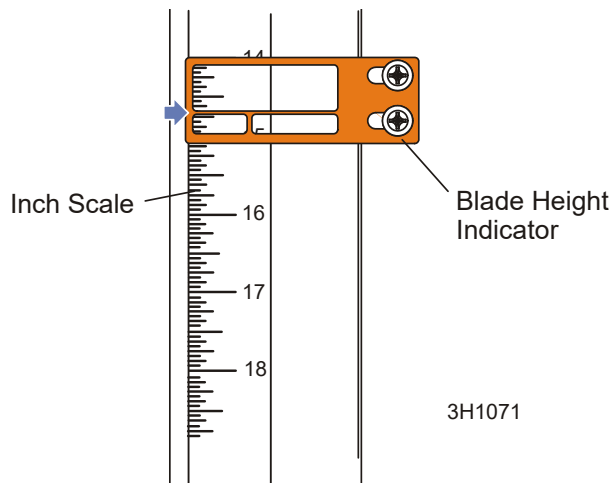


FIG. 4-8

The scales are attached to the frame and move up and down with the saw head. The blade indicator, used to read the inch and quarter scales, remains stationary.

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

The magnetic quarter scale has four sets of marks. Each set represents a specific lumber thickness. Saw kerf and shrinkage allowance are included, but actual board thickness will vary slightly depending on blade thickness and tooth set.

See Table 4-1.

Standard Quarter Scale

TABLE 4-1

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.

4.10 Water Lube Operation

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

See Figure 4-9.

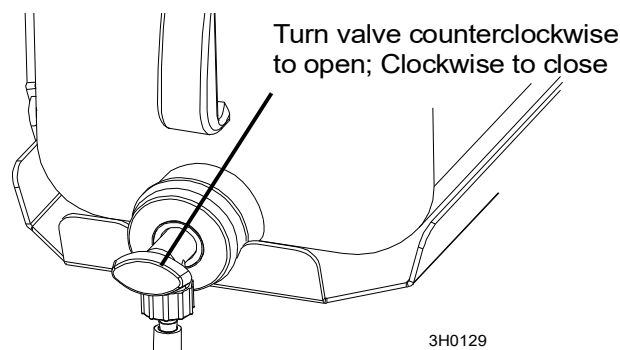


FIG. 4-9

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



WARNING! 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.



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

4.11 Preparing The Sawmill For Towing

The Wood-Mizer trailer package makes transporting your sawmill easy and convenient. To get your sawmill ready for towing, follow these instructions.

1. Move the saw carriage to the front end of the sawmill. Raise the rear outriggers.

See Figure 4-10. For Fine Adjust Outriggers (FAOs), make sure the outrigger base is adjusted so that the grease fitting is just below the lowest outrigger hole before securing

the FAO in position with the lock pin. This provides maximum ground clearance while preventing the lock pin from hitting the grease fitting.

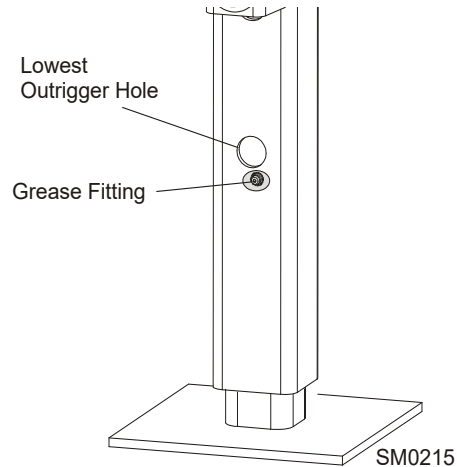


FIG. 4-10. FINE ADJUST OUTRIGGER ONLY.



CAUTION! Be sure the outrigger base is adjusted properly before securing the FAO in position with the lock pin. Failure to do so will cause damage to the outrigger grease fitting.

CAUTION! Do not adjust the FAO outrigger base height while there is weight on the FAO. Damage to the FAO may result.

2. Move the clamp all the way in toward the main bed frame tube.



CAUTION! Move the hydraulic clamp and turner to provide maximum ground clearance before towing. Failure to do so may result in damage to the sawmill.

3. Use the hydraulic controls to raise the log turner and loader as high as they will go. Manually lift the loader and hook the loader chain to the elbow of the turner. Use the hydraulic turner lever to lower the turner until the chain is tight. Push the loader lever down to bring the loader arm channels up to the loader.

4. Release the blade tension.



CAUTION! Changes in temperature could cause increased pressure in the blade tensioner and loss of fluid from the gauge. Release the blade tension when the mill is not in use to avoid damage to the tensioner.

5. Move the carriage forward to the travel position over the rear bed rail.

6. Position the hole in the saw head over the travel rest pin.

4

Sawmill Operation

Preparing The Sawmill For Towing

7. Lower the saw head until it is seated firmly on the rest pin.
8. Secure the rest pin in the vertical position with the locking pin.

See Figure 4-11.

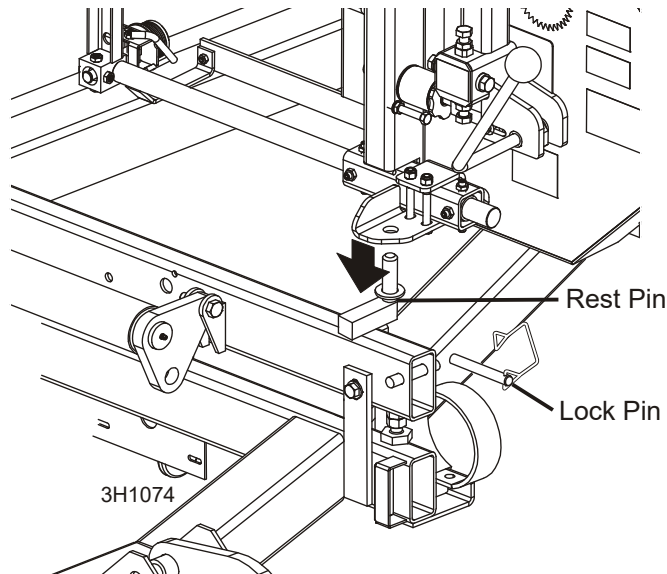


FIG. 4-11

9. Continue lowering the head 3/4" (19mm) until it contacts the stop blocks on the mast rails.



CAUTION! It is important that the lower stop bolts are properly adjusted to secure the carriage on the track rail. Failure to properly adjust the stop bolts can cause saw head damage, especially during mill transportation.

10. **LT35 Rev. A1.00 - A1.00/LT35HD Rev. A1.00 - A1.01 and LT35 Rev. A6.06+/LT35HD Rev. A6.07+:** If necessary, adjust the stops located at the bottom of the mast so the saw head contacts them after it is lowered 3/4" (19mm) past where it contacts the rest pin.

See Figure 4-12.

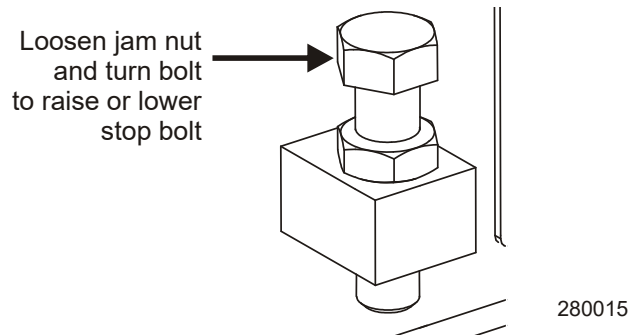


FIG. 4-12

11. Engage the clutch lever. This keeps the drive belt tight and the motor from bouncing while traveling. Be sure to disengage the clutch lever after reaching the destination to avoid deformation of the drive belt.
12. Hook the carriage safety chain located at the bottom of the carriage to the bracket at the bottom of the mast.

See Figure 4-13.

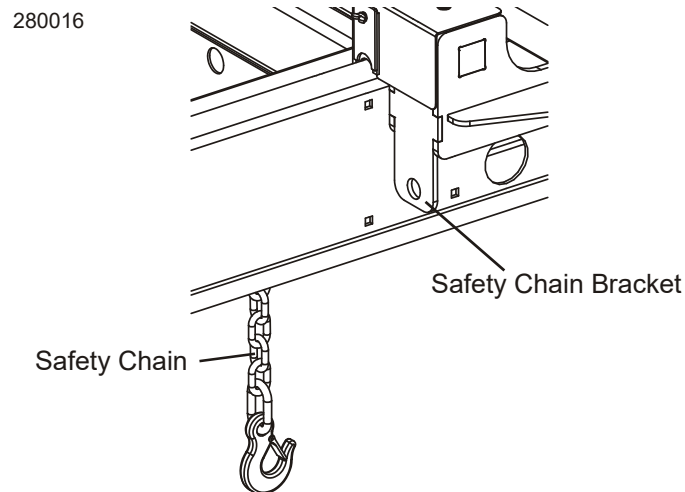


FIG. 4-13



CAUTION! Check to be sure the saw head safety chain is secured before towing the sawmill. Failure to properly secure the saw head can result in severe machine damage. 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.

13. Remove all loose objects from the bed of the mill. Store the outrigger jack handle in the bracket provided on the rear/loading-side outrigger guide.

14. Place both fenders in the slots located behind the trailer tires and secure with rubber straps. Raise all but the very front outrigger.

For Fine Adjust Outriggers (FAOs), be sure to adjust the outrigger base height so that the grease fitting is just below the lowest outrigger hole before securing the FAO in position with the lock pin.





CAUTION! Be sure the outrigger base is adjusted properly before securing the FAO in position with the lock pin. Failure to do so will cause damage to the outrigger grease fitting.

CAUTION! Do not adjust the FAO outrigger base height while there is weight on the FAO. Damage to the FAO may result.

See the trailer operator's manual for specific information regarding hitch operation and towing the sawmill.

SECTION 5 MAINTENANCE

 **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!** Disconnect and lockout power before performing any service to the electrical system. For battery-powered equipment, disconnect the negative battery terminal cable. For AC-powered equipment, follow the lockout procedure provided in the safety section ([See Section 2.2](#)). Failure to do so may result in injury and/or electrical system damage.

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

See the [Maintenance Chart](#) for a complete list of maintenance procedures and intervals. Keep a log of machine maintenance by recording in the machine hours and the date you perform each procedure.

Refer to option and engine manuals for other maintenance procedures.

5.1 Wear Life

Table 5-1 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 for scheduling replacement parts.

Part Description	Estimated Life
Up/Down Motor Brushes	1000 hours
B57 Blade Wheel Belts	400 hours
Up/Down Motor	2000 hours
Up/Down Switch	1000 hours
Blade Guide Rollers	1000 hours
Power Feed Switch	1200 hours
Power Feed Motor	1500 hours
Up/Down Belt	2000 hours
Drive Belt	1250 hours

TABLE 5-1


5.2 Blade Guides

Check the rollers for performance and wear every blade change.

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

Keep clear of exiting sawdust. Keep hands, feet and any other objects away from the sawdust chute when operating sawmill.


Check that 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.

1. Remove the excess sawdust from the blade wheel housings and sawdust chute every blade change.
2. Remove all sawdust and debris from around the velocity fuse valves every 8 hours of operation. (The valves are located at the bottom of the optional log loader cylinders.)
3. Remove sawdust and debris from grounding block along the bed rail and mast.

5.4 Carriage Track, Wiper & Scraper

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 power feed movement.

 **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.

1. Clean track rails to remove any sawdust and sap buildup every eight hours of operation.
 - 1). Use a light-grade sandpaper or emery cloth to sand off any rust or other adhering particles from the rails.

- 2). Lubricate the rails by wiping them with Dexron III ATF transmission fluid or equivalent. 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 the track roller housing covers and brush any sawdust buildup from the housings every twenty-five hours of operation.
3. Clean and lubricate the felt track wipers every twenty-five hours of operation.
 - 1). Unbolt the middle track cover, remove from the sawmill and remove any sawdust buildup.
 - 2). Soak the felt wiper with Dexron III transmission fluid.

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

4. Check that the track 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 screw.

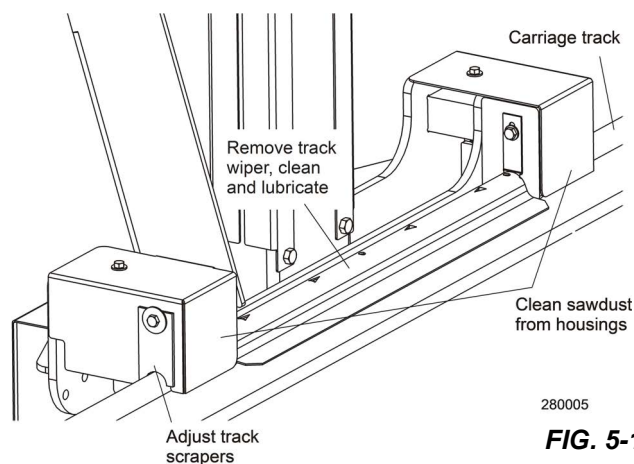


FIG. 5-1

5.5 Vertical Mast Rails

Clean the vertical mast rails every 50 hours of operation.

CAUTION! Grease on the mast rails will collect sawdust. Use Dexron III transmission fluid or equivalent.

5.6 Miscellaneous

1. Oil all chains with Dexron III transmission fluid or equivalent every fifty hours of operation.

CAUTION! Chain lube causes sawdust buildup in chain links. Use Dexron III transmission fluid or equivalent. When lubricating the chains, it is important not to get fluid in the clutch mechanism. Transmission fluid in the clutch mechanism can damage the clutch. Remove any excess fluid from the chains and the clutch mechanism.

2. Grease the optional loading arm and side support pivots with a NLGI No. 2 grade lithium grease every fifty hours of operation.
3. Check the mill alignment every setup ([See Section SECTION 7](#)).
4. Ensure 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

Rotate the blade wheel belts and check them for wear every 50 hours. Rotating the belts will provide longer belt life. Replace belts as necessary with only B57 belts supplied by Wood-Mizer.

5.8 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. For AC-powered equipment, follow the lockout procedure provided in the safety section ([See Section 2.2](#)). Failure to do so may result in injury and/or electrical system damage.

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

CAUTION! Do not over-tighten the drive belt. Damage to the engine may result

Measure the belt tension with a gauge every 50 hours. See Table 5-2 for drive belt tension specifications

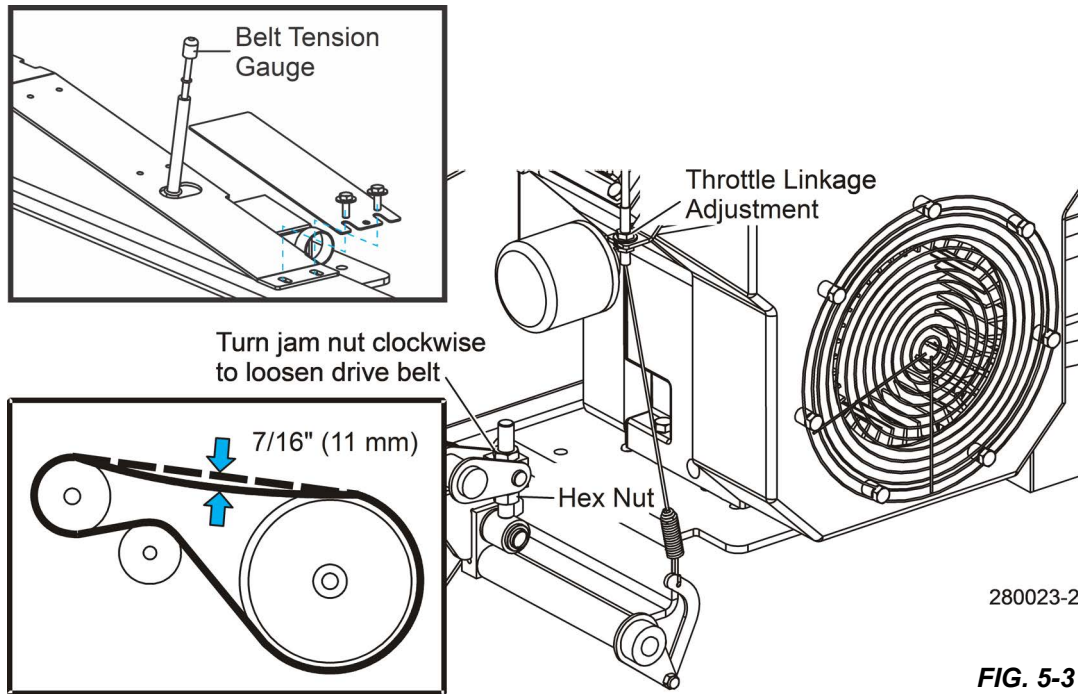
NOTE: Wood-Mizer offers a belt tension gauge (Part No. 016309) that will let you accurately measure the belt tension.

Engine/Motor	New Belt Installation/New Sawmill Operation				Subsequent Adjustment		
	Deflection Inches (mm)	Installation Force lbs. (kg)	Check After First	Acceptable Force lbs. (kg)	Then Check Every	Deflection Inches (mm)	Force lbs. (kg)
ALL	7/16" (11mm)	14 lbs. (6.35kg)	20 hrs	14 lbs. (6.35kg)	50 hrs	7/16" (11mm)	14 lbs. (6.35kg)

TABLE 5-2

Adjust the drive belt tension

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



280023-2

FIG. 5-3

2. **GAS OPTION ONLY:** After tensioning the drive belt, check the throttle linkage and adjust if necessary.

NOTE: With the clutch handle engaged, the throttle linkage should move the throttle lever to full speed. To adjust, loosen the throttle linkage adjustment nuts and slide the throttle linkage down. Retighten the screw.

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

Adjust the drive belt support

The drive belt support is designed to extend belt life. The bracket should be adjusted to NOT touch the drive belt when the clutch handle is engaged (down position), AND to hold the drive belt away from the engine pulley when the clutch handle is disengaged (up position). **See Fig. 5-4.**

Adjust the drive belt support as needed. Depending on your engine model, the drive belt support may be located near the drive wheel or drive pulley.

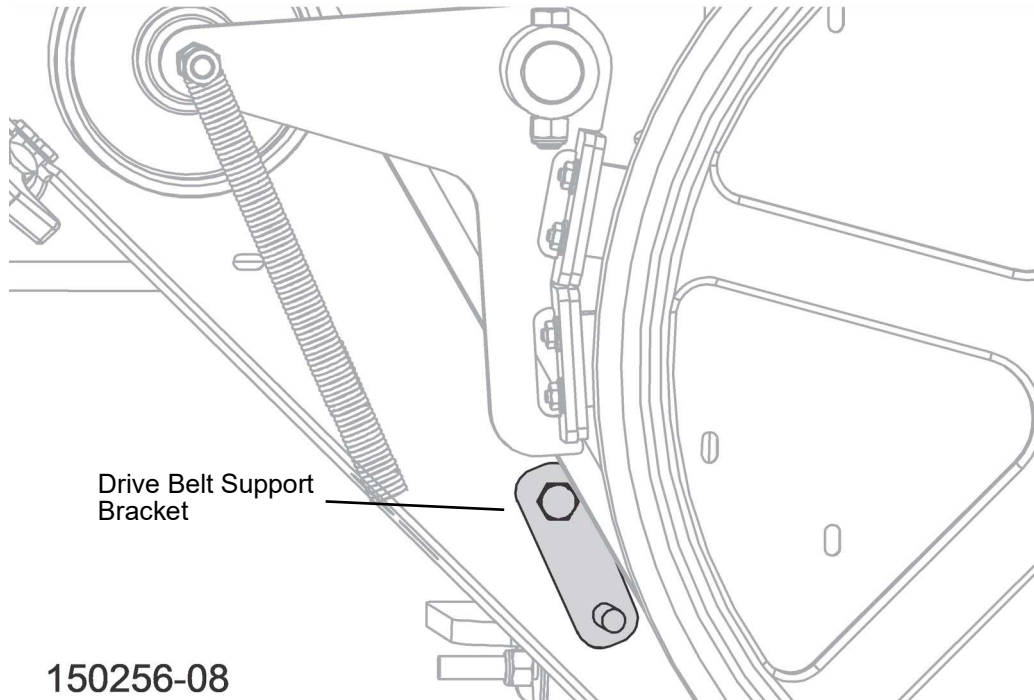


FIG. 5-4

1. Ensure power is off.
2. Loosen adjustment bolt.
3. Position bracket so rod is close to, but does not touch, drive belt with clutch handle engaged. This is approximately 1/8-1/16" (3-1.5mm).
4. Retighten adjustment bolt 25-27 pound feet (34-37 newton meters).

Adjust the belt enhancement bracket

The belt enhancement bracket is designed to keep the drive belts seated in the grooves of the drive pulley when belts are not tensioned. See Fig. 5-5.

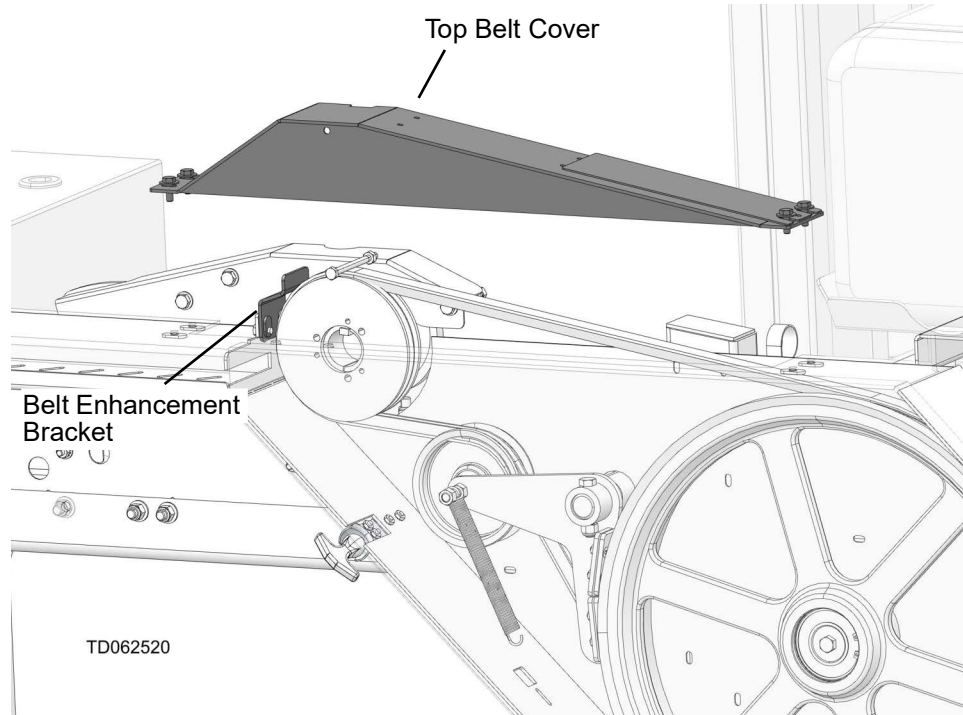


FIG. 5-5

NOTE: The belt enhancement bracket is used **ONLY** with engine models G25 and D17. Engine model D24 does **NOT** include the belt enhancement bracket.

1. Ensure power is off.
2. Remove top belt cover.
3. Loosen (2) bracket mounting bolts.
4. Position bracket 1/16"-1/8" away from belt while belt is engaged.
5. Retighten bracket mounting bolts.
6. Reinstall top belt cover.

5.9 Hydraulic System

1. Check the hydraulic fluid level every fifty hours of operation.

Add fluid as necessary. The level in the hydraulic pump should be 3/4" (19mm) from the top with all cylinders collapsed.

2. If used in a humid environment, drain and replace two quarts (.95 liters) of fluid every six months.

This will drain any accumulated water and help prevent pump failure due to water ingestion. It also will prevent excessive fluid wear and allow the fluid to maintain its hot end performance.

3. If humidity is not a problem, drain and replace one gallon (3.8 liters) of fluid every year to prevent fluid wear.

If you are operating in temperatures -20° to 100° F (-29° to 38° C), use an all-weather hydraulic fluid such as Conoco MV32. For alternate fluids and/or other temperature ranges, refer to the chart below. Operating above the recommended temperature range of a fluid could result in excessive pump wear. Operating below the recommended temperature range could result in reduced hydraulic cylinder speed. To change fluid types, replace one gallon of the current fluid with one gallon of the alternate fluid.

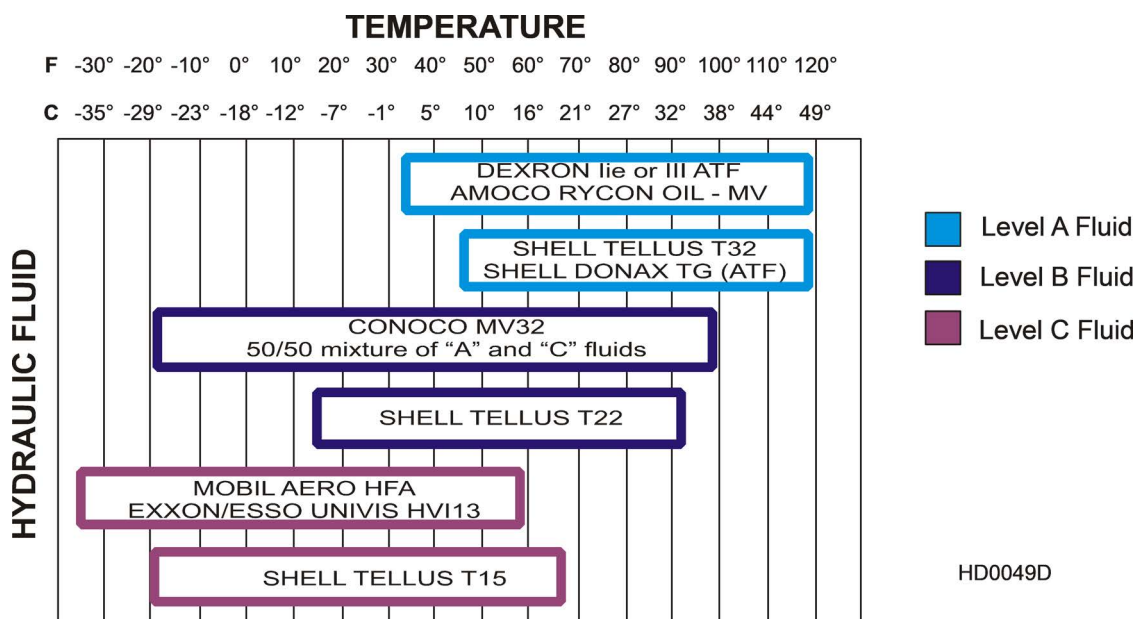


FIG. 5-6

4. Replace the hydraulic system cartridge filter every 500 hours of operation.
5. Inspect the hydraulic pump motor brushes every 750 hours of operation. Remove brush dust and replace the brushes if they worn to a length of 1/4" (6mm) or shorter.

CAUTION! Do not operate the hydraulic system if the pump motor brushes are worn shorter than 1/4" (6mm). Damage to the pump motor may result.

6. Periodically check all hydraulic lines and fitting as needed. Replace as necessary.

5.10 Up/Down System

WARNING! 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.

1. Adjust the up/down chain tension as needed. **See Fig. 5-7.**
 - 1). Measure the up/down chain tension with the head all the way to the top of the vertical mast.
 - 2). Secure the saw head as described above.
 - 3). Use the adjustment nut (at the bottom of the mast) to adjust chain until the center can be deflected 3/4" (1.9cm) forward and 3/4" (1.9cm) backward with a 5 lb. (2.3 Kg) deflection force.

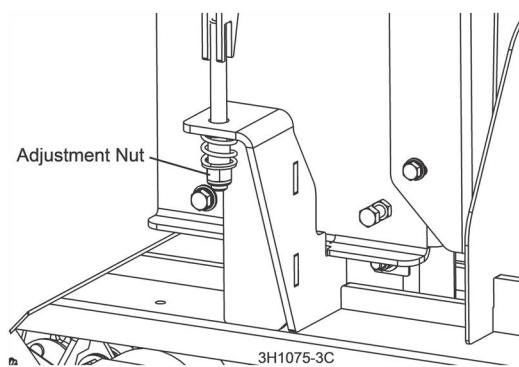


FIG. 5-7

2. Adjust the up/down motor belt as needed. **See Fig. 5-8.**
 - 1). Remove the up/down housing cover.
 - 2). Loosen the motor mount bolts.
 - 3). Pull the motor upward so there is 3/8" (9.5 mm) deflection with a 5 lb. (2.3 Kg) deflection force.
 - 4). Retighten the motor mount bolts.
 - 5). Replace the drive pulley cover.

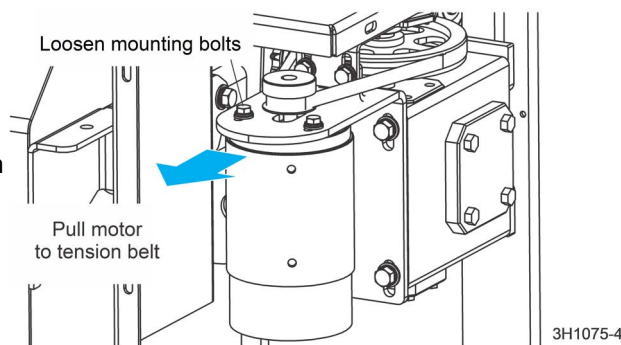


FIG. 5-8

3. Periodically check and replace any damaged or worn belts.
4. Check the up/down gearbox oil level. Add a synthetic gear oil such as Mobil Glygoyle 460 as needed.
5. Drain and refill the gearbox with 24 (0.7L) ounces of oil after every 5000 hours of sawmill operation or every 2 years, whichever comes first.

NOTE: Wood-Mizer offers replacement gear oil in 8 ounce (0.24L) bottles.

5.11 Power Feed

1. Adjust the power feed chain as needed. **See Fig. 5-9.**
 - Move the saw head to the front of the mill.
 - Use the two lock nuts at the rear of the mill to tighten or loosen the power feed chain.
 - Adjust the chain until it the slack measures 7 to 8 inches (17.8 to 20.3 cm) from the top of the top rail at its lowest point.

CAUTION! Do not overtighten the feed chain. Damage to the power feed motor may result.

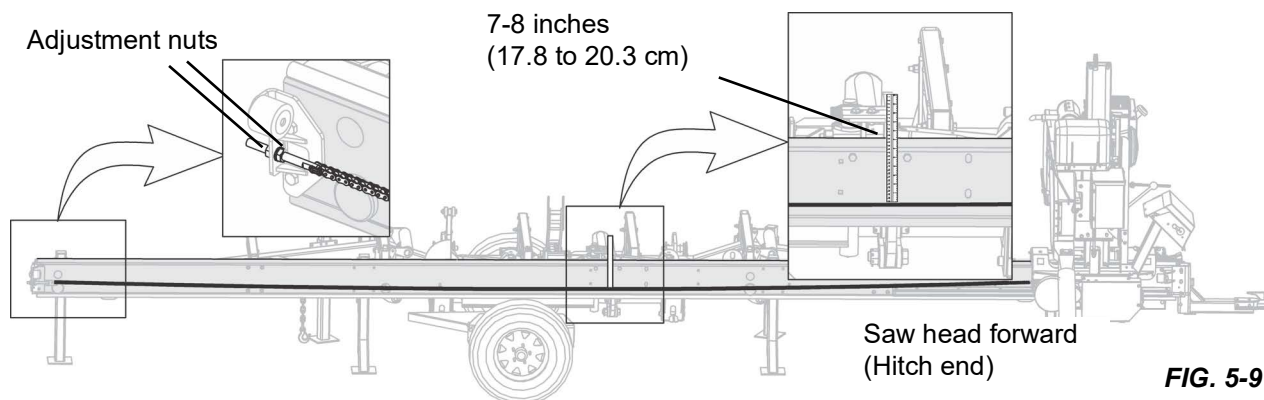


FIG. 5-9

2. Adjust the power feed belt as needed. When the power feed belt gets loose, it will begin slipping. This causes the carriage to not move forward when cutting. To retighten the belt:
 - Remove the power feed belt cover.
 - Loosen mounting bolts
 - Pivot the motor so that the motor pulley moves away from the large feed pulley.
 - Tighten the belt so there is 1/8" (3 mm) deflection with a 7 lb. (3.2 Kg) deflection force.
 - Retighten the motor bolts and replace the feed motor cover.

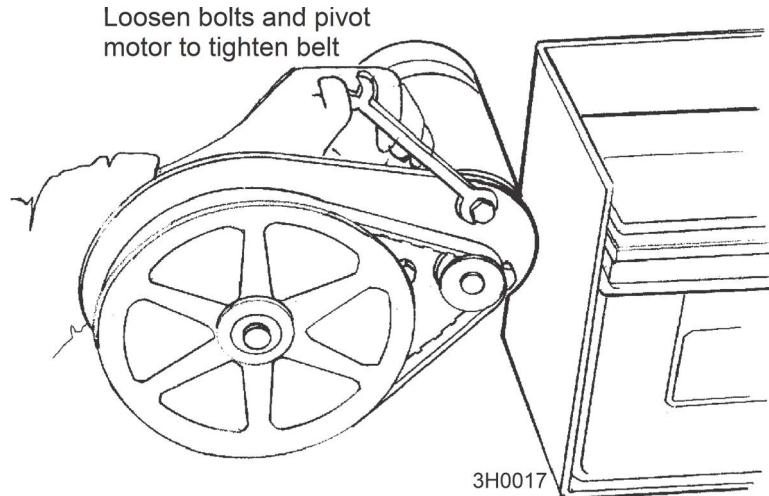


FIG. 5-10

5.12 Charging The Battery

DANGER! Batteries expel explosive gases. Keep sparks, flames, burning cigarettes, or other ignition sources away at all times.

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.

Always wear safety goggles and a face shield when working near batteries.

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) which can destroy clothing and burn the skin.

EMERGENCY TREATMENT FOR CONTACT WITH BATTERY COMPONENTS (LEAD/SULFURIC ACID) *per SDS (Safety Data Sheet):*

EYE CONTACT	Sulfuric Acid and Lead: Flush eyes immediately with large amounts of water for at least 15 minutes while lifting lids. Seek immediate medical attention if eyes have been exposed directly to acid.
SKIN CONTACT	Sulfuric Acid: Flush affected area(s) with large amounts of water using deluge emergency shower, if available, shower for at least 15 minutes. Remove contaminated clothing, including shoes. If symptoms persist, seek medical attention. Wash contaminated clothing before reuse. Discard contaminated shoes. Lead: Wash immediately with soap and water.
INGESTION	Sulfuric Acid: Administer large amounts of water. Do NOT induce vomiting or aspiration into the lungs may occur and can cause permanent injury or death; consult physician.
INHALATION	Sulfuric Acid: Remove to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Consult a physician. Lead: Remove from exposure, gargle, wash nose and lips; consult physician.

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.

Ensure 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. Remove the battery box lid.
2. Clean the battery terminals if necessary.
3. Connect the positive charger/jumper cable directly to the positive battery terminal.
4. Connect the negative charger/jumper cable to a grounded metal surface.
5. Follow the instructions supplied with your specific battery charger.

NOTICE 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.

6. After the battery is completely recharged, remove the negative charger/jumper cable from ground.
7. Remove the positive charger/jumper cable from the battery.
8. Replace the battery box lid and replace the flat washers and wing nuts.

5.13 Maintenance chart

MAINTENANCE LOG (Check <i>Engine And Option Manuals</i> for additional maintenance procedures)	MANUAL REFERENCE	MAINTENANCE INTERVAL
Clean sawdust from all guards, vents, control boxes, blade wheel housings, or any area where sawdust may gather	See Section 5.3	8 hours
Clean and lubricate top/bottom track	See Section 5.4	8 hours
Check blade guide roller wear	See Section 5.2	8 hours Every blade change
Inspect fingers inside sawdust chute	See Section 5.3	8 hours Every blade change
Remove sawdust from upper track roller housings	See Section 5.4	25 hours
Clean and lubricate upper track wiper	See Section 5.4	25 hours
Clean & lube mast rails	See Section 5.5	50 hours
Grease pivot points and bearings/oil chains	See Section 5.6	50 hours
Rotate drive/idle blade wheel belts/check for wear	See Section 5.8	50 hours
Inspect (optional) hydraulic lines, fuel lines, & fittings	See Section 5.12	50 hours
Check all belt tensions	See Section 5.9 See Section 5.13 See Section 5.14	50 hours
Check (optional) hydraulic fluid level	See Section 5.12	50 hours
Check feed & up/down chain tensions	See Section 5.13 See Section 5.14	50 hours
Check up/down gear box fluid level	See Section 5.13	50 hours
Re-check belt tensions	See Section 5.9 See Section 5.13 See Section 5.14	200 hours
Replace the hydraulic system cartridge filter	See Section 5.12	500 hours
Inspect hydraulic pump motor brushes	See Section 5.12	750 hours

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)
Blade Does Not Track Right on Drive Wheel	Tension too tight	Tension blade to recommended specifications
	Cant adjustment is incorrect	Readjust
Blade Guides Do Not Spin While Cutting	Flat/worn belts	Replace B-57 belts
	Frozen bearings	Replace bearings
Drive Belts Wear Prematurely or Jump	Engine/motor and drive pulleys out of alignment	Align pulleys.
Boards Thick Or Thin On Ends Or Middle Of Board.	Stress in log which causes log to not lay flat on the bed.	After log has been squared, take equal cuts off opposing sides. Take a board off the top. Turn the log 180 degrees. Take a board off. Repeat, keeping the heart in the middle of the cant, and making it your last cut.
	Set in teeth.	Resharpen and reset blade.
	Bed rails misaligned.	Realign sawmill.

6

Troubleshooting Guide

Electrical Problems

PROBLEM	CAUSE	SOLUTION
Height Adjustment Jumps or Stutters When Moving Up or Down.	Up/down chain improperly adjusted.	Adjust up/down chain.
Lumber Is Not Square	Vertical side supports not square to bed	Adjust side supports.
	Blade not parallel to bed rails	Adjust bed rails parallel to blade.
	Sawdust or bark between cant and bed rails	Remove particles
	Tooth set problems	Resharpener and reset blade
Sawdust Builds Up On Track	Excessive oiling	Do not oil track
	Track wipers worn	Adjust wipers to firmly contact track
	Track is sticky	Clean track with solvent and apply silicone spray
Wavy Cuts	Excessive feed	Slow feed rate
	Improperly sharpened blade (This will be the problem 99% of the time!)	Resharpener blade (See Sharpener Manual - read entire manual!)
	Blade guides improperly adjusted	Adjust blade guides.
	Sap buildup on blade	Use Water Lube.
	Tooth set problem	Resharpener and reset blade

6.2 Electrical 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.



WARNING! Disconnect and lockout power before performing any service to the electrical system. For battery-powered equipment, disconnect the negative battery terminal cable. For AC-powered equipment, follow the lockout procedure provided in the safety section ([See Section 2.3](#)). Failure to do so may result in injury and/or electrical system damage.

PROBLEM	CAUSE	SOLUTION
Up/down Excessively Slow.	Up/down belt loose.	Adjust belt to be as loose as possible without slipping.
	Vertical wear pads too tight.	Adjust pads.

PROBLEM	CAUSE	SOLUTION
	Worn up/down motor or motor brushes.	Replace up/down motor or motor brushes.
Up/down Or Power Feed Motors Do Not Work.	Worn contacts in switch.	Replace switch.
	Burned-out motor.	Replace motor.
	Bad connection on battery post or loose wire.	Check for loose wire or terminal connections.
Up/Down Or Power Feed Switches Remain Engaged When Switch Is Released.	Worn contacts in switch.	Manually move the power feed or up/down switch back to neutral or "off" position. Replace switch.
Up/Down Or Power Feed Motors Overheat And Lose Power.	System overload or bind occurred.	Correct problem. Allow motor to cool before restarting.
	Normal operation factors exceeded (eg: up/down control jockeyed excessively).	Allow motor to cool before restarting.
Everything Works And Then Cuts Out - Works Again.	Bad battery, fuse, or ground connection.	Check and tighten connections.
Nothing Works Electrically.	Dead battery.	Check for short circuit or turn OFF key.
	Blown fuse.	Replace.
	Corrosion on battery post.	Remove connection and clean posts.
Battery Will Not Stay Charged.	Key switch left ON.	Turn switch OFF when not in use.
	Short in system.	Visually check for bare wires and/or have checked.
	Charging system not functioning.	Have charging system checked by authorized dealer.
	Bad battery cells.	Check fluid levels and add proper solution
	Idle improper.	Adjust low end RPM per engine manual.
	Loose alternator belt.	Check belt tension and tighten if necessary.
	Loose connections at alternator.	Check and tighten connections.

6.3 Power Feed Problems

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Follow the instructions below to solve the possible power feed problems.

If the saw head does not go forward but reverse works:

- Access the power feed control module in the control box,
- With the key/toggle switch on put the drum switch/joystick in the forward position,
- When turning the speed control, check the lights on the control module.

See Figure 6-1.

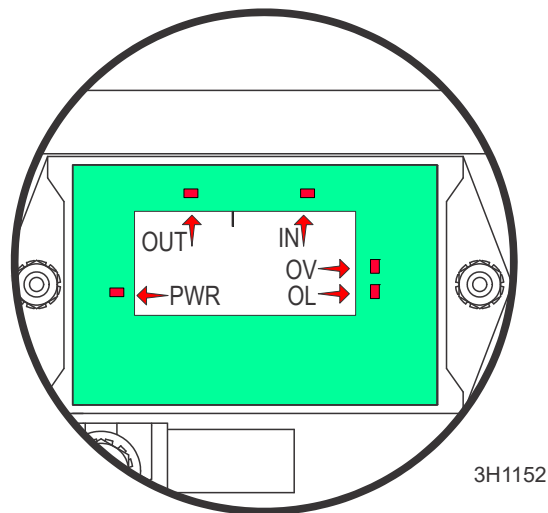


FIG. 6-1

Under normal conditions the PWR light is on indicating power is at the control module:

- If PWR light is not on, check the drum switch connections.

Under normal operation the IN light brightens and dims as the feed rate switch is turned up and down:

- If the IN light is always on or always off, the feed rated switch could be wired incorrectly,
- If the IN light is erratic, the feed rate switch is worn.

Under normal operation the OUT light brightens and dims (same as the IN light) as the feed rate switch is turned up and down:

- If the OUT light does not correspond with the IN light, check if the OV or OL lights are on,
- If the OV or OL lights are not on, replace the control module (Part No. 024396-1).

Under normal conditions the OV light should never be on:

- If the OV light is on, there is an over voltage condition. Perform a continuity check on the free wheeling diode with the diode removed from the block. There should be continuity only one direction.

See Figure 6-2.

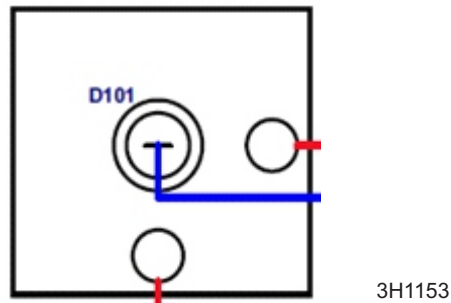


FIG. 6-2

Under normal conditions the OL light should never be on:

- If the OL light is on, there is an overload condition. This could be a mechanical bind. Remove the belt from the power feed motor,
- If the OL light is still on:
- Remove the gate (G) wire from the MOSFET module and apply 12 volts to the gate terminal of the MOSFET (this is the small spade terminal),
- If the saw head tries to go down the track, replace the control module (Part No. 024396-1).
- If it does not go down the track, replace the MOSFET module (Part No. 024387) and control module (Part No. 024396-1).

See Figure 6-3.

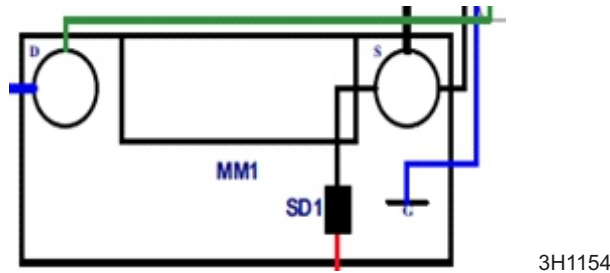


FIG. 6-3

The saw head does not travel in reverse but forward works:

- Check the drum switch connections.

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Follow the instructions below to solve the possible power feed problems.

If the saw head does not go forward or reverse:

- Disconnect the wires to the power feed motor,
- Jump a volt meter light across the 2 motor wires,
- With the toggle switch in the on position, put the joystick in the reverse position,
- If there is a 12VDC reading, check for stuck or worn motor brushes or replace motor.

If there is no voltage reading:

- Jump a volt meter across the B+ and B- terminals of the control board,
- The voltage should read 12 VDC. If there is no voltage reading, check the main relay function,
- If the voltage is good, check the 5V and 0V terminals of the control board,
- Jump a volt meter across the 5V and 0V terminals of the control board,
- The voltage should read 5 VDC. If there is no voltage, replace the control board,

- If the 5 VDC voltage is good, check the S2 terminal of the control board in neutral,
- The voltage should read 2.5 VDC. If there is no voltage, replace the relay board.

If voltage is good, check reverse function:

- Check the S2 terminal of the control board in reverse,
- The voltage should read 4.2 VDC
- If the voltage is good, replace the control board,
- If there is no voltage, swap the joysticks,
- If the voltage is now good, replace the joystick. If there is no voltage, replace the relay board.

Check forward function:

- Check the S2 terminal of the control board in forward,
- With the speed control switch is the slow position, the voltage should read 0.5 VDC,
- If there is no voltage, replace the relay board,
- If the voltage is good, check the S1 terminal of the control board,
- The voltage should vary between 0 VDC and 5 VDC as the speed control switch is rotated fast to slow,
- If the voltage is good, replace the control board,
- If there is no variable voltage, replace the speed control switch.

6.4 Power Feed Variable Feed Rate Switch Test

With the feed rate dial switch all the way down, move the shaft of the dial back and forth to see if there is a jerky response. Turn the dial and move the shaft back and forth again. Repeat several times. If the jerkiness occurs at the same location on the dial several times, you need to replace the variable speed switch.



WARNING! Disconnect and lockout power before performing any service to the electrical system. For battery-powered equipment, disconnect the negative battery terminal cable. For AC-powered equipment,

6 Troubleshooting Guide

Hydraulic Problems

follow the lockout procedure provided in the safety section ([See Section 2.3](#)). Failure to do so may result in injury and/or electrical system damage.

6.5 Hydraulic Problems



WARNING! Disconnect and lockout power before performing any service to the electrical system. For battery-powered equipment, disconnect the negative battery terminal cable. For AC-powered equipment, follow the lockout procedure provided in the safety section ([See Section 2.3](#)). 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.

PROBLEM	CAUSE	SOLUTION
You Can Actuate Any Hydraulic Handle, But Get No Response From The Pump.	Carriage not positioned properly to provide power to the pump	Make sure carriage contact bracket is adjusted far enough forward for battery positive contact to touch 6ft. strip on main tube. Check contact and strip for tarnish or loose wires. Clean as necessary
	Poor ground connection	Check ground connection between pump and saw frame and between battery negative contact and lower rail. Check contact and rail for tarnish or loose wires. Clean as necessary
	Blown fuse	Replace
	Low or dead battery	Test battery amperage capability (such as low battery charge, low alternator output, defective voltage regulator, bad battery cell, battery age deterioration, etc.). Replace or recharge as necessary
	Poor cable connection	Check cable connection and make sure that battery terminals are in good condition (not corroded)
	Defective solenoid (may be indicated by solenoid clicking) See Monarch manual for troubleshooting solenoid	After checking all other possibilities for low voltage to solenoid, check solenoid. Tapping on solenoid may fix temporarily. Replace solenoid if necessary. NOTE: The solenoid is not a standard automotive type. Order from Wood-Mizer only

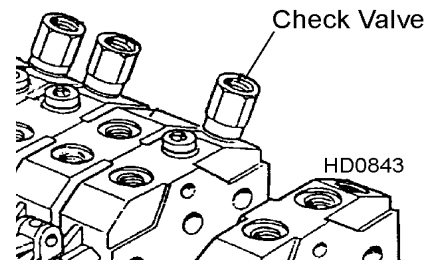
PROBLEM	CAUSE	SOLUTION
	Defective pump motor	Remove motor from pump and inspect. Repair or replace as necessary
You Can Get Response From the Pump By Actuating All But One or Two Handles	Valve assembly switch contacts are not properly adjusted	<p>Locate the valve switch at the bottom of the valve assembly. Use a 3MM allen wrench to loosen the set screw on each of the five switch contacts. Press each contact to the valve block and tighten the contact set screw to secure in place. CAUTION! Do not overtighten!</p> <p>NOTE: Do not adjust the valve switch or switch spring; they have been preset at the factory.</p>
Pump Motor Runs With Little Or No Response From The Cylinders	Low battery	Test battery. Recharge or replace as necessary
	Low fluid level	Check fluid level. Add an all-season hydraulic fluid such as Amoco Rycon Oil MV or Mobil Multipurpose ATF (automatic transmission fluid) until level is 4 - 4 1/2" (100 - 114mm) from bottom of reservoir with all cylinders retracted
	Pressure relief valve moved from proper setting	Adjust pressure relief valve.
	Low air temperature causing fluid to thicken	Allow fluid to warm up. Synthetic fluids are available that allow for hydraulic operation in cold weather conditions (Univis HVI 13)
Pump Motor Runs Continuously When Power Contact Is Made	Solenoid is stuck closed	Tapping the solenoid may solve this problem temporarily. Replace solenoid
Fluid Leaks From Around Cylinder Piston Ram	Worn seals	Replace seals in cylinder. Check piston ram for abrasive weld that may be causing premature seal failure
Fluid Leak Around Pump Box	Loose seal or fitting	Wipe pump off completely to locate cause of leak. You may have to unbolt the pump to wipe behind it. NOTE: Movement of the sawmill can cause fluid to slosh up into the foam filter in the reservoir cap, and subsequently spray out, giving the appearance that fluid is leaking from the pump
Hydraulic Side Supports Go Down Before Or At Same Time As Log Turner	Dirt in sequence valve	Remove sequence valves and clean thoroughly with kerosene. NOTE: Be sure to reassemble the valve and install it in its original position on the cylinder

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Troubleshooting Guide*Hydraulic Problems*

PROBLEM	CAUSE	SOLUTION
	Retainer in sequence valve worn	Replace sequence valve
	Low air temperature causing fluid to thicken	Allow fluid to warm up. Synthetic fluids are available that allow for hydraulic operation in cold weather conditions (Univis HVI 13)
Hydraulic Turner Goes Up Before Or At Same Time As Side Supports	Dirt in sequence valve	Remove sequence valves and clean thoroughly with kerosene. NOTE: Be sure to reassemble the valve and install it in its original position on the cylinder
	Retainer in sequence valve worn	Replace sequence valve
	Low air temperature causing fluid to thicken	Allow fluid to warm up. Synthetic fluids are available that allow for hydraulic operation in cold weather conditions. (Univis HVI 13)

PROBLEM	CAUSE	SOLUTION
<p>Hydraulic Toe Boards "Creep" UP OR DOWN without the valve control handles being operated OR do not raise or lower at all..</p>	<p>Can be a result of shock load caused by improperly using the toe boards to "cushion" or break the fall of a cant onto the bed):</p> <ul style="list-style-type: none"> · damaged hoses · damaged cylinder seals or cylinder · damaged valve 	<p>INITIAL CHECK</p> <p>To check, disconnect the toe board hydraulic hose from its current valve section and temporarily connect it to another valve section. Check to see if the hydraulics operate properly.</p> <p>If hydraulics operate properly, hoses and cylinder seals are good. Perform further valve inspection, found below.</p> <p>If creep still occurs, check all hoses for possible pinholes causing leakage. Replace if applicable. Retest. If creep still occurs, replace cylinder seals or cylinder and retest.</p> <p>Be sure to reconnect the hose to the proper valve section when done.</p> <p>FURTHER VALVE INSPECTION</p> <p>If further inspection of the valve is required after initial check, remove the check valve shown below. Flush the check valve with an air hose or solvent to remove any dirt from the valve's seat. Reinstall and test again. Check to see if the hydraulics operate properly.</p> <p>If creep still occurs, replace the check valve with a new one. Retest. If creep still occurs, replace the hydraulic valve.</p>
<p>Bad check valve (results in one of the toe boards experiencing down-creep)</p>		<p>Check the release valve as instructed above. If the release valve is good, replace the high-pressure hydraulic check valves (A12869) located on the pump.</p>



PROBLEM	CAUSE	SOLUTION
Pump runs but makes “growling” sound and hydraulic functions are slow, jerky or don’t work at all.	Low fluid level	Check fluid level and add fluid as necessary. Check for leaks in the system at the control box fittings, hoses and cylinders
One of the log loader cylinders does not move when lowering the loader causing the foot of other to raise completely before loader will start down.	Damaged cylinder shaft	Replace the cylinder that is not moving

6.6 Hydraulic Pressure Test

TO CHECK HYDRAULIC PRESSURE:

1. Disconnect power from the pump by moving the saw head forward until it no longer contacts the power strip.
2. Locate the loading arm port fitting on the hydraulic valve body. Disconnect the hydraulic hose from the fitting and install a gauge to the fitting. **NOTE:** Installing the gauge at the loading arm fitting port will insure the pressure reading is not affected by a relief valve.



WARNING! Wear safety goggles and keep people away from area when performing this procedure. Check gauge fitting connection for leaks before activating the hydraulic valve levers. Carefully activate the lever and watch for leaks. Fix any leaks before proceeding. Highly pressurized fluid escaping through a leak may cause serious injury.

See Figure 6-4.

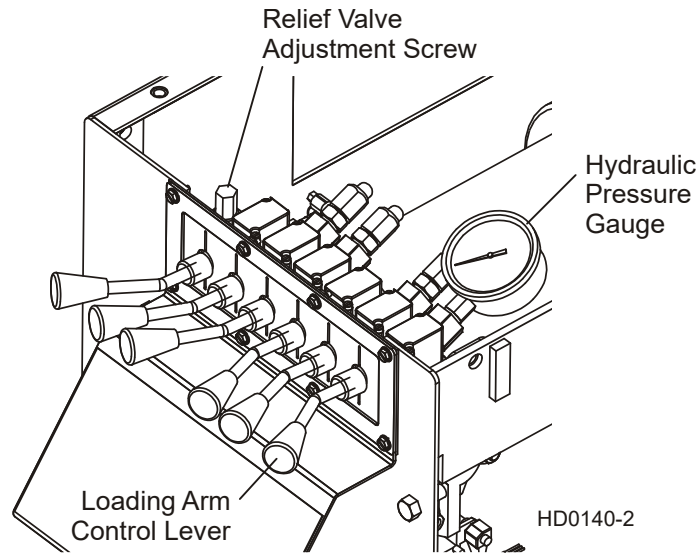


FIG. 6-4

3. Restore power to the pump by moving the saw head back until it contacts the power strip.
4. Operate the loading arm hydraulic lever and read the pressure on the gauge. Hydraulic pressure is factory-set at 2000 ±100 psi and should not need to be readjusted. The relief valve adjustment screw shown may be used to fine-tune the hydraulic pressure:

Remove the adjustment screw nut. Tighten the adjustment screw (clockwise) to increase pressure. Loosen the adjustment screw (counterclockwise) to lower pressure.



CAUTION! Pressure should not exceed 2000 psi. If it does, the amp draw will rise above the design maximum of 200 amps, and could cause battery and system problems. Pressure above 2000 psi may also damage the hydraulic hoses.

6.7 Simple Set Troubleshooting

Error Messages

See Table 6-1. Simple Set error messages.

Error	Description
E02 Sensor	This message is displayed if Simple Set cannot detect the encoder sensor magnet when entering auto mode. Check that the gear box extension is aligned with the sensor. Push any button on the Simple Set control to exit to manual mode.

E03 Sensor

This message is displayed if Simple Set cannot detect a signal from the encoder sensor when entering auto mode. Check the encoder sensor cable connections. push any button on the Simple Set control to exit to manual mode.

Diagnostic Lights (After Mid-2016)

See Figure 6-5. LED indicator lights are provided on the encoder sensor housing and the display circuit board and H-bridge module inside the Simple Set control box. Observing the LED lights during operation can help identify problems with the sensor, switches or Simple Set control.

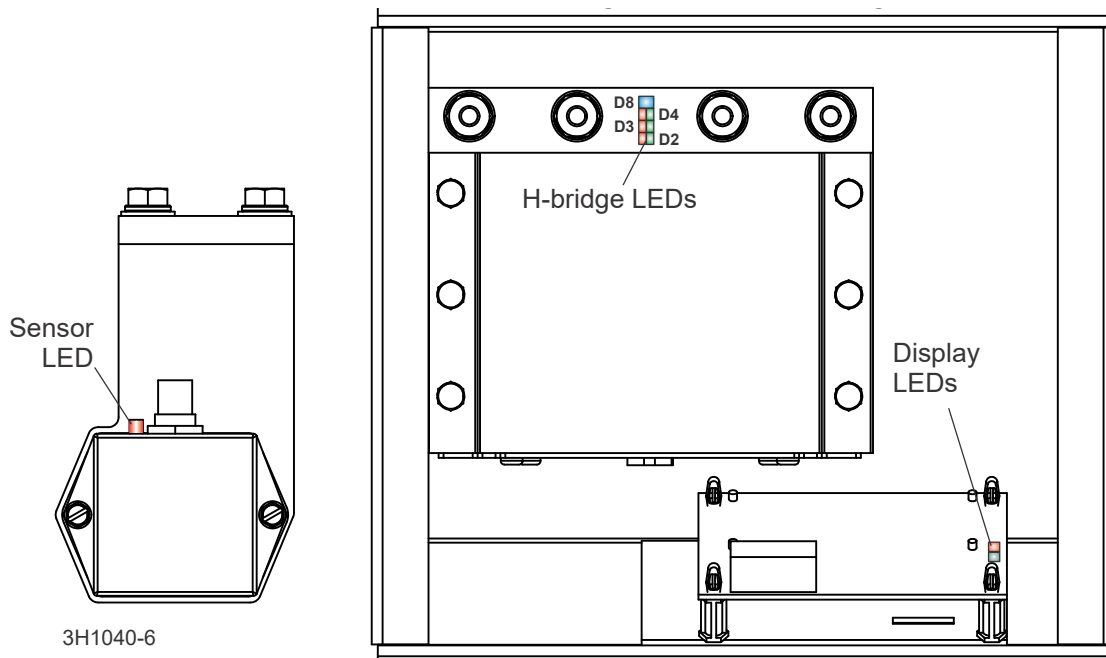


FIG. 6-0

During normal operation:

- As the up/down gearbox shaft spins to move the saw head up or down, the sensor LED will illuminate and brighten. After each complete revolution of the shaft, the LED will turn off then illuminate and brighten.
- In manual mode, the control board LED and the H-bridge D2, D3, D4 LEDs will illuminate (red) when the drum switch is activated in the down direction and (green) when the up/down drum switch is activated in the up direction. The LEDs will turn off when the drum switch is released. The H-bridge D8 LED will be lit blue to indicate the 5 Volt DC output to the control board.
- In auto mode, the control box LED and the H-bridge D2, D3, D4 LEDs will illuminate (green) in the up direction as in manual mode. When the drum switch is bumped in the down direction, the control box LED and the H-bridge D2, D3, D4 LED's will illuminate (red) in the down direction but the control board LED will immediately turn

off. When the blade reaches the increment value set by the Simple Set control, the D2, D3, D4 LEDs on the H-bridge will turn off. If the drum switch is held down or the saw head coasts past the increment, the H-bridge D2, D3, D4 LEDs will illuminate (green) indicating the blade will move up to return to the increment value. When the blade reaches the increment value, the H-bridge D2, D3, D4 LEDs will turn off.

Diagnostic Lights (Prior to Mid-2016)

See Figure 6-6. LED indicator lights are provided on the encoder sensor housing and the display circuit board and H-bridge module inside the Simple Set control box. Observing the LED lights during operation can help identify problems with the sensor, switches or Simple Set control.

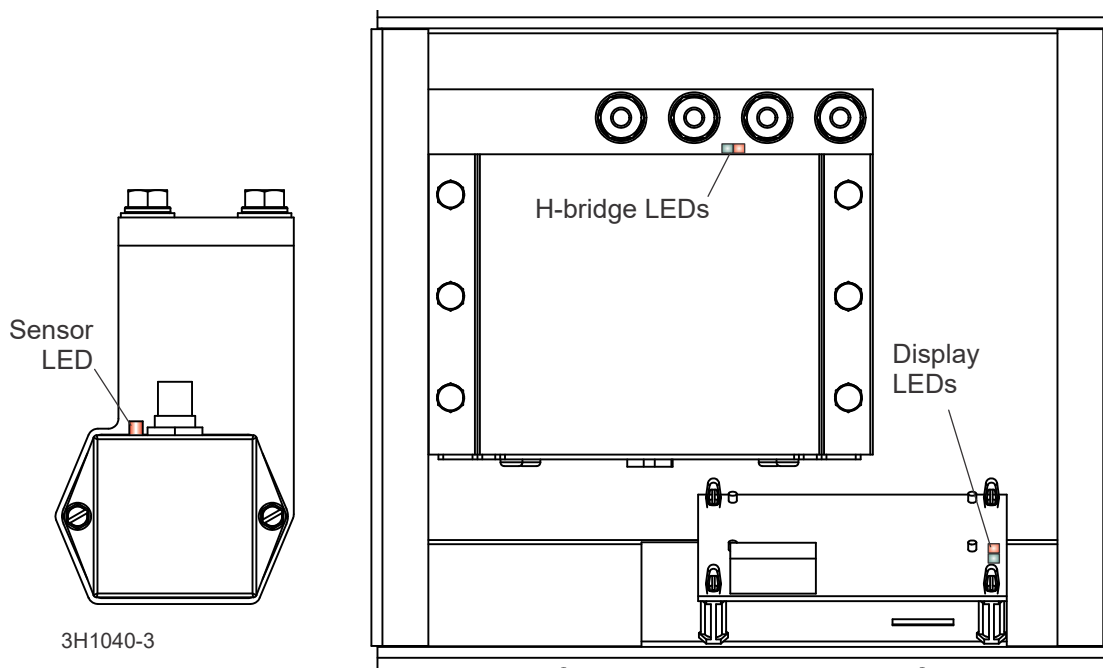


FIG. 6-0

During normal operation:

- As the up/down gearbox shaft spins to move the saw head up or down, the sensor LED will illuminate and brighten. After each complete revolution of the shaft, the LED will turn off then illuminate and brighten.
- In manual mode, both control box LEDs will illuminate red when the up/down switch is activated in the down direction and green when the up/down switch is activated in the up direction. Both LEDs will turn off when the up/down switch is released.
- In auto mode, both control box LEDs operate the same (green) in the up direction as in manual mode. When the up/down switch is bumped in the down direction, both LEDs will illuminate red and then the display LED will immediately turn off. When

the blade reaches the increment value set by the Simple Set control, the LED on the H-bridge will turn off. If the up/down switch is held down or the saw head coasts past the increment, the H-bridge LED will illuminate green indicating the blade will move up to return to the increment value. When the blade reaches the increment value, the H-bridge LED will turn off.

Simple Set Up/Down Gear Settings Adjustment

1. Make sure the power to the control box is on.
2. Press and hold the Manual button and then press and hold the UP arrow. Release the Manual button, then release the UP arrow. The Simple Set control panel will display the Speed setting.

See Figure 6-7.

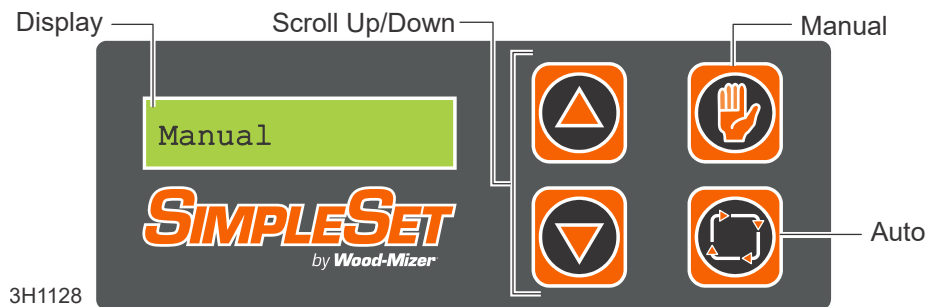


FIG. 6-7

3. Press the Auto button several times until "Gear: 0.xxxx" appears.
4. Use the Up/Down arrow buttons to set the value of the Gear Setting as shown in the table below.

See Table 6-1.

Models	Revision	Gear Setting	InvGear Setting
LT40 (Default)	All	0.0938 (Default)	No (Default)
LT35/LT35HD	Any revision (upgraded with Up/Down Kit 074029)	0.1170	Yes
LT35/LT35HD	A1.00 - A1.02	0.2250	Yes
LT35/LT35HD	A2.00 - A2.01	0.3492	Yes
LT35/LT35HD	A3.00 - A4.01	0.1170	Yes
LT35/LT35HD	A5.00+ (or any revision upgraded with Up/Down Kit 074316)	0.1170	No
LX150	A1.00+	0.1335	Yes

5. Press the Auto button to display "InvGear: xx".
6. Use the Up/Down arrow buttons to set the InvGear setting to the required value as shown in the table above.
7. Press the Manual button to return to the main menu.

Simple Set PID Settings

1. Make sure the power to the control box is on.
2. Press and hold the Manual button and then press and hold the UP arrow. Release the Manual button, then release the UP arrow. The Simple Set control panel will display the Speed setting.

See Figure 6-8.

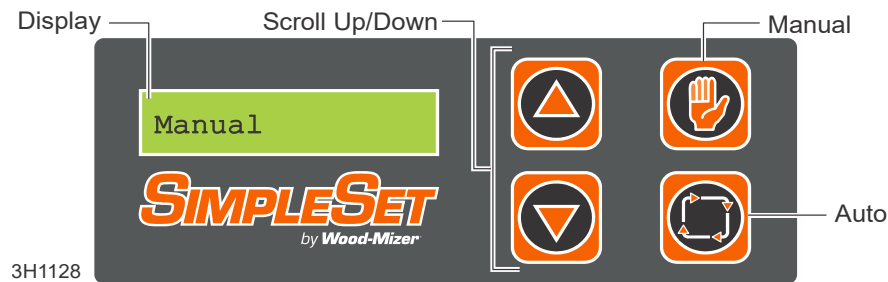


FIG. 6-8

3. Press the Auto button several times until PGain, DGain and IGain settings appear. Use the Up/Down arrow buttons to set the settings to the required values. **IMPORTANT!** The PID settings are factory-set and they should not be changed. If necessary, set the PID settings to the following values: PGain 1.0, DGain 0.0 and IGain 0.0.
4. Press the Manual button to return to the main menu.

Simple Set Troubleshooting (LT35)

Follow the instructions below to solve the possible power feed problems.

If the saw head does not go up or down:

- Disconnect the wires to the up/down motor,
- Jump a volt meter or test light across the two wires going back to the control box,

- With the key/toggle switch on, put the drum switch/joystick in the up position,
- If there is a 12VDC reading, check for stuck or worn motor brushes or replace motor.

If there is no voltage reading:

- Check the lights on the control module: the red light when in the down position and the green light when in the up position,
- If there are no lights, check for voltage at the drum switch terminals.

If the lights are working:

- Check the lights on the h-bridge: the red light when in the down position and the green light when in the up position,
- If there are no lights, replace the control module.

If the lights are good:

- Replace the h-bridge.

Setworks inaccuracy issues:

- If the saw head comes up short of the drop, verify that there are no binds on the mast. If it is good, replace the encoder and cable,
- If the saw head goes long past the drop, verify that the up/down belt is tight. If it is good, replace the encoder and cable.

IMPORTANT! The PGain settings and speed values should never be changed!

SECTION 7 SAWMILL ALIGNMENT

The Wood-Mizer sawmill is factory aligned. 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

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 3.4](#)).
3. Adjust the idle-side cant control to track the blade ([See Section 3.5](#)).
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.

Saw Head Tilt

As the blade enters a wide log or cant, the outside of the saw head will drop down slightly. To compensate for the drop, the saw head is adjusted 1/16" (1.5 mm) higher at the outside.

1. Move the saw carriage so the blade is positioned over a bed rail. Adjust the blade guide arm to 1/2" (15 mm) from full open.
2. Raise the saw head so the bottom of the blade measures 14 3/4" (375 mm) from the top surface of the bed rail near the inner blade guide assembly.

See Figure 7-1.

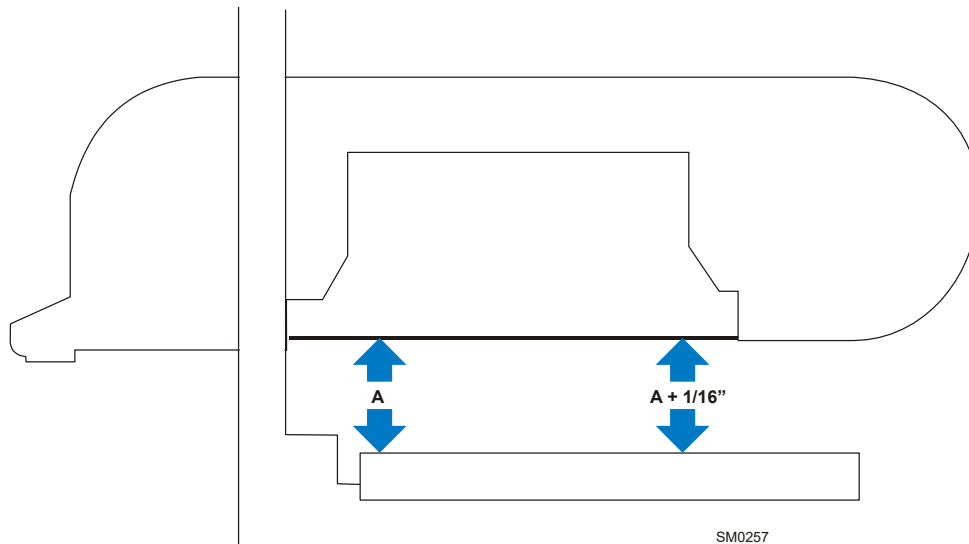


FIG. 7-1

3. Measure from the blade to the bed rail near the outer blade guide assembly. This measurement should be 1/16" (1.5 mm) higher than the inner measurement or 14 13/16" (376.5 mm).

See Figure 7-2. To adjust the saw head tilt, use the horizontal adjustment nuts. To raise the outside of the saw head, tighten the two adjustment nuts. Recheck the measurement

from the blade to the bed rails and adjust the horizontal adjustment nuts until the outside of the saw head is 1/16" (1.5mm) higher than the inside.

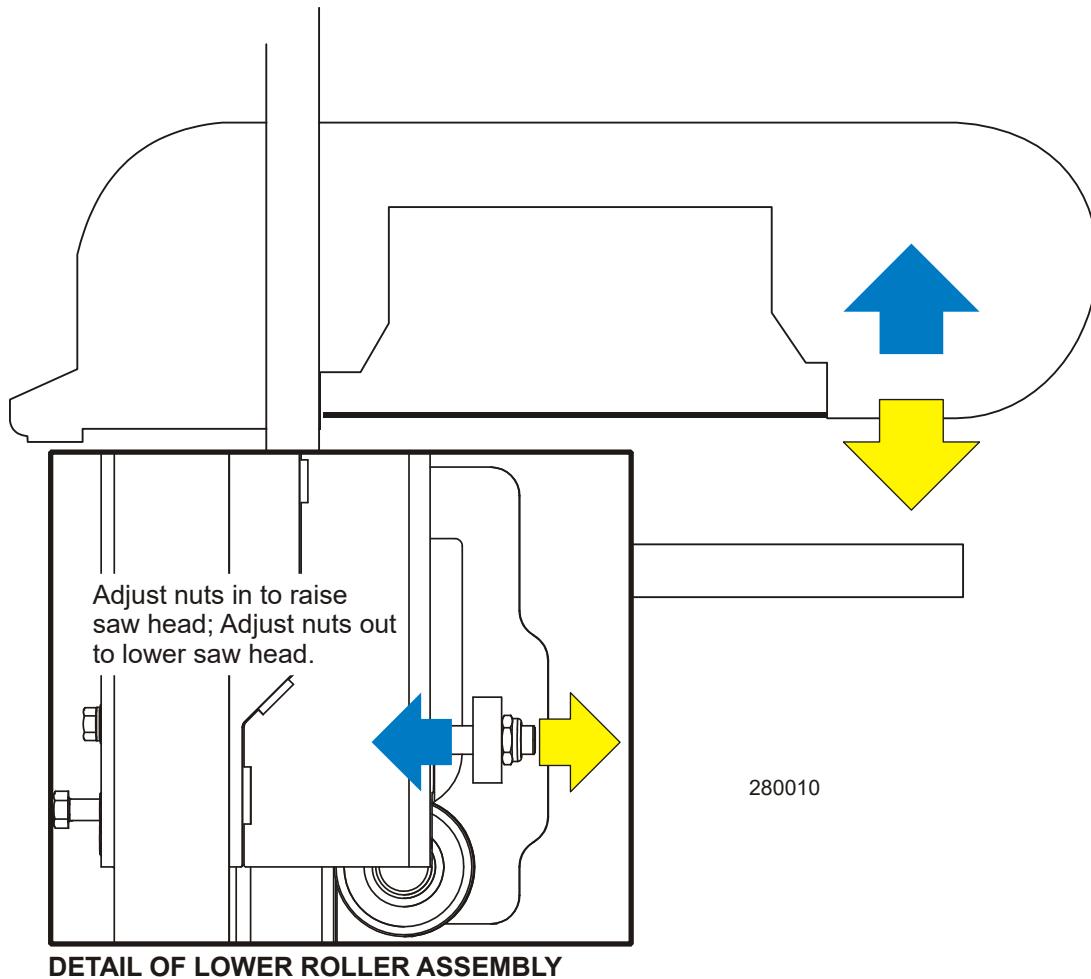


FIG. 7-2

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.

7 Sawmill Alignment

Blade Guide Arm Alignment

1. Adjust the blade guide arm out to 1/2" (13 mm) from fully open.

See Figure 7-3. 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.

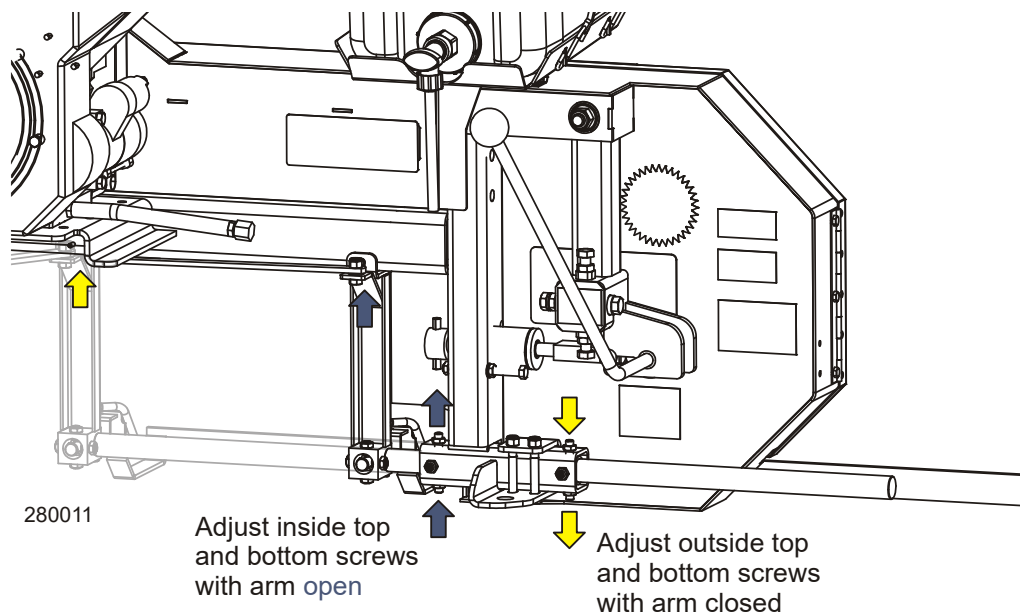


FIG. 7-3

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 to ensure the arm moves easily in and out.

See Figure 7-4. 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.

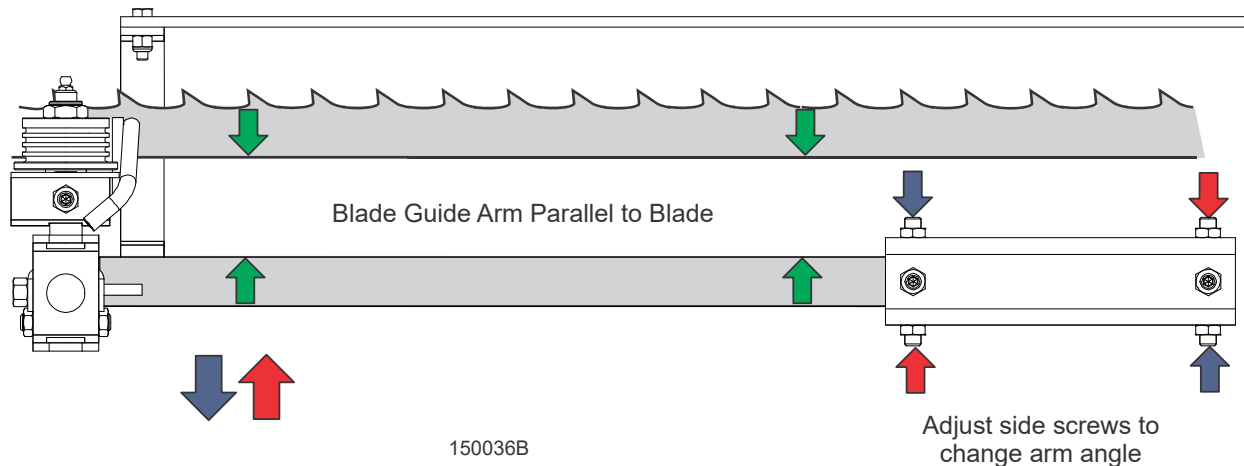


FIG. 7-4

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 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.

7 Sawmill Alignment

Blade Guide Vertical Tilt Alignment

1. Open the adjustable blade guide arm 1/2" (13 mm) from full open.
2. Clip the alignment tool on the blade. Position the tool close to the outer blade guide assembly. Be sure the tool does not rest on a tooth or burr, and is lying flat against the bottom of the blade.

See Figure 7-5.

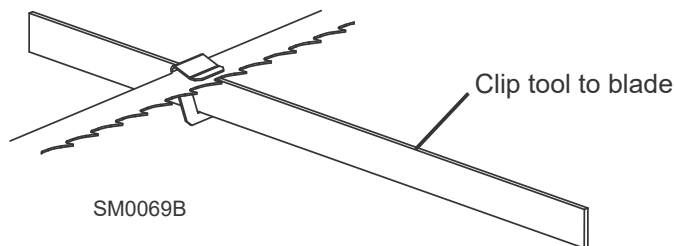


FIG. 7-5

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.

See Figure 7-6. 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.

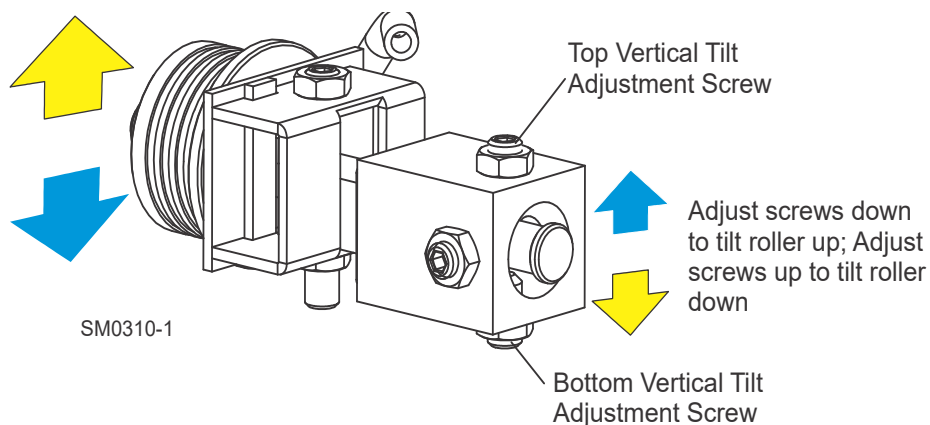


FIG. 7-6

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 7-7.

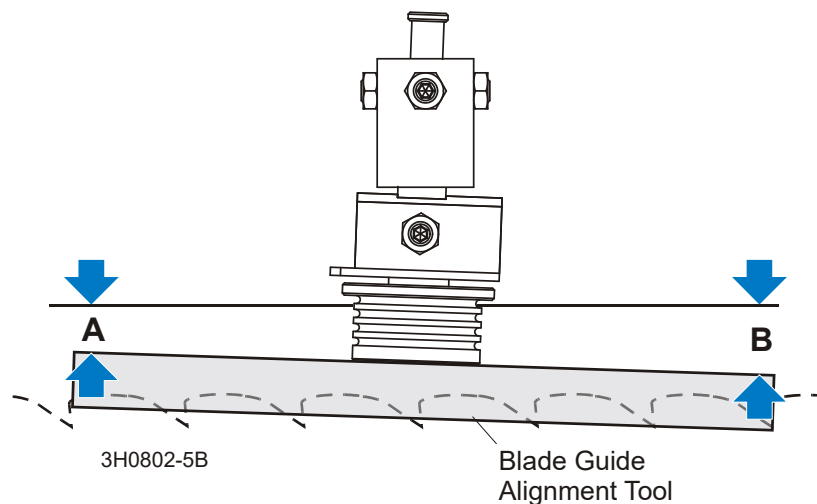


FIG. 7-7

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' \pm 1/8" [3 mm]).

See Figure 7-8. 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

7 Sawmill Alignment

Blade Guide Flange Spacing

left screw and tighten the right screw. Tighten the jam nuts and recheck the tilt of the blade.

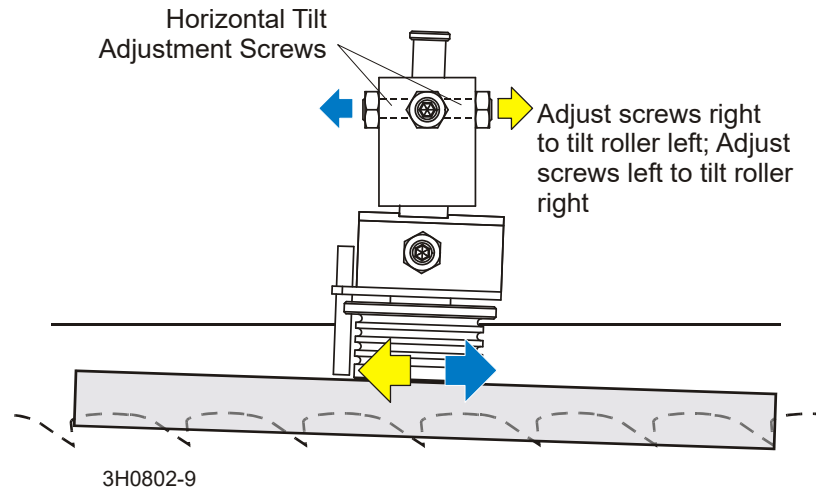


FIG. 7-8

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 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.

See Figure 7-9. Loosen the top and one side screw shown. Tap the blade guide forward or backward until properly positioned. Retighten the screws and jam nuts.

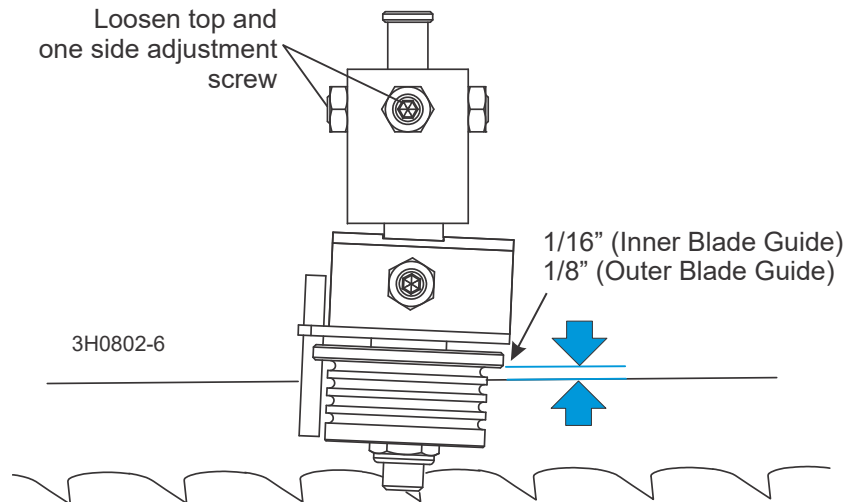


FIG. 7-9

2. 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.

Side Support Alignment

Logs and boards are clamped against the side supports when sawing. The sides 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

7 Sawmill Alignment

Side Support Alignment

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 7-10. 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.

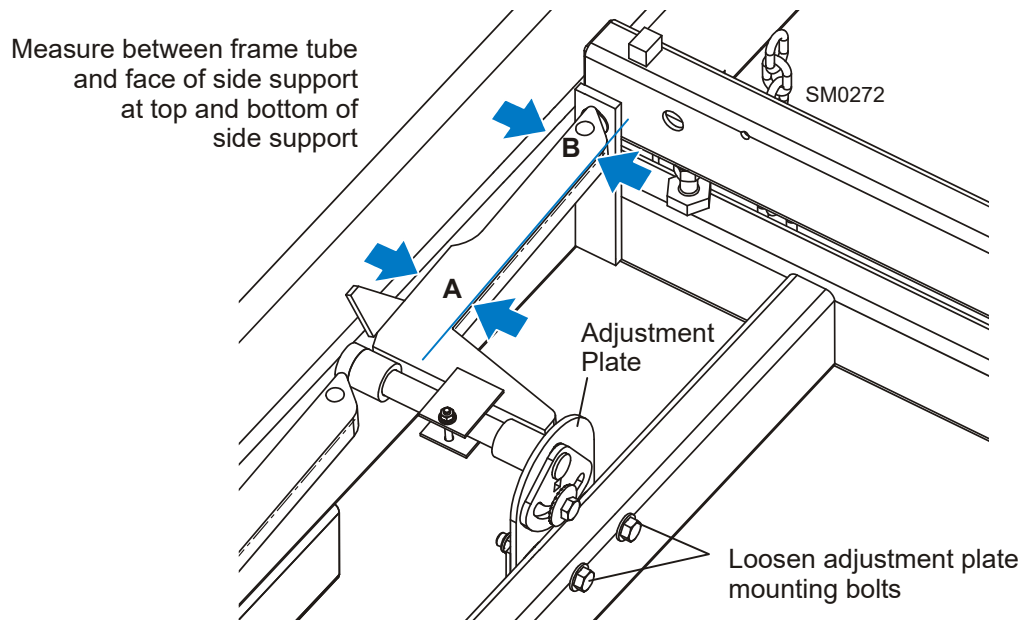


FIG. 7-10

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 7-11. Loosen the side support mounting bolt. Use a 3/8" ratchet to rotate the pin until the side support is square to the bed.

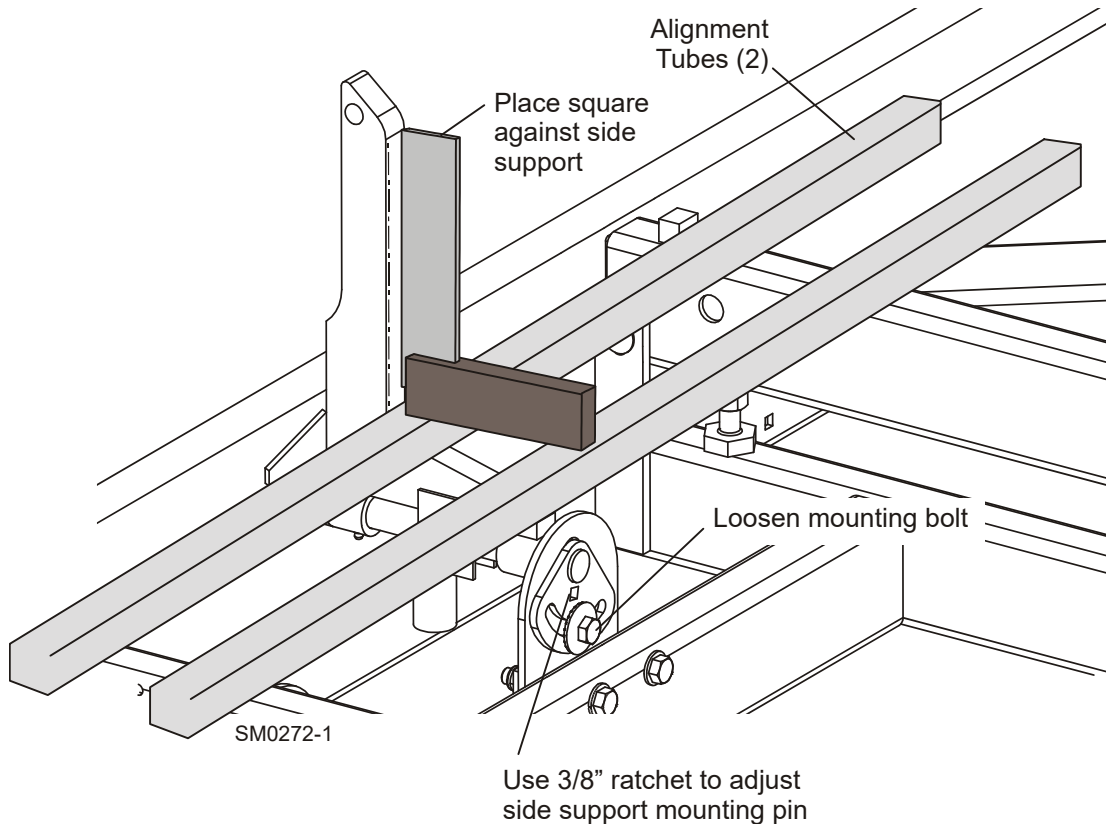


FIG. 7-11

6. 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.

Loosen the indicator bracket mounting bolts. 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 bracket mounting bolts.

7 Sawmill Alignment

Complete Alignment Procedure

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.

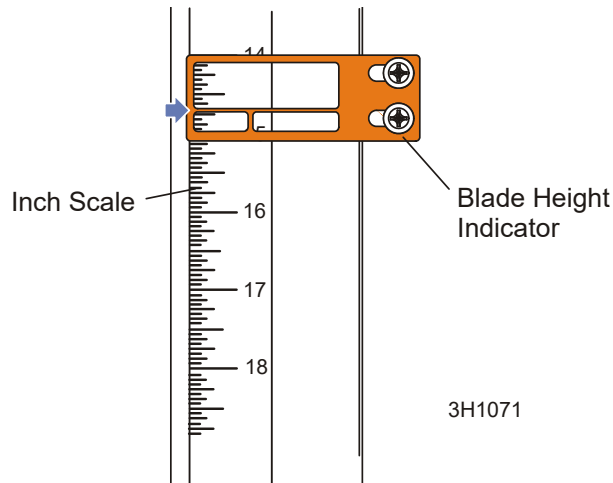


FIG. 7-11

7.2 Complete Alignment Procedure

Frame Setup

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

If your sawmill is stationary, with no trailer axle, shim the feet so the weight of the sawmill is evenly supported.

If your sawmill has a trailer axle and adjustable outriggers, adjust the outriggers as follows:

LT35: Adjust the two outriggers on the main frame tube down just enough to lift weight from the trailer tire.

All Portable Sawmills: Adjust the two outer outriggers down just so they touch the ground but do not bear weight.

[See SECTION 3](#) for additional setup information.

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.

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 3.4](#)).
6. Close the blade housing cover 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 7-12.

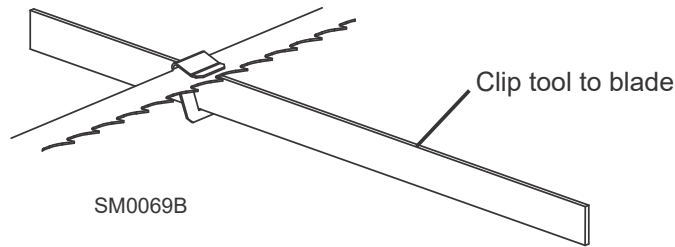


FIG. 7-12

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.

See Figure 7-13. Use the vertical adjustment screws to adjust the drive-side blade wheel. 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.

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.

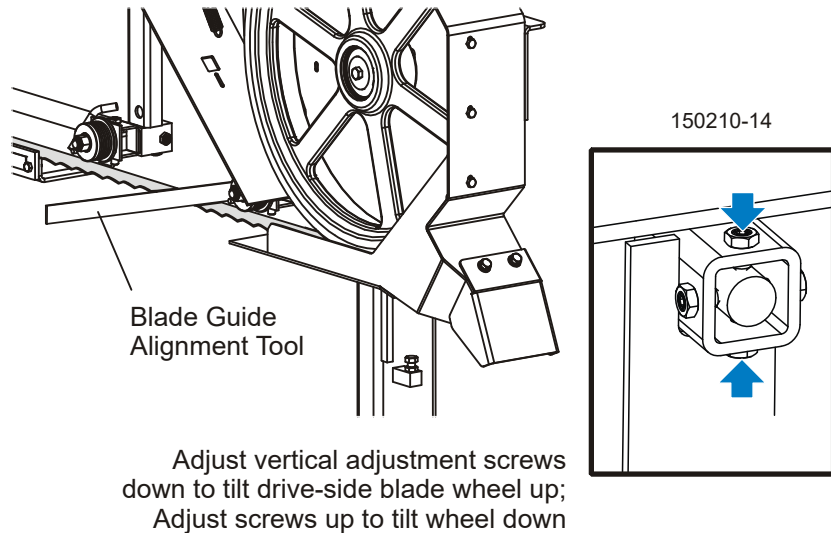


FIG. 7-13

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 7-14. 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

7 Sawmill Alignment

Blade Wheel Alignment

nut on the bottom adjustment screw and tighten the screw. Tighten the top and bottom jam nuts.

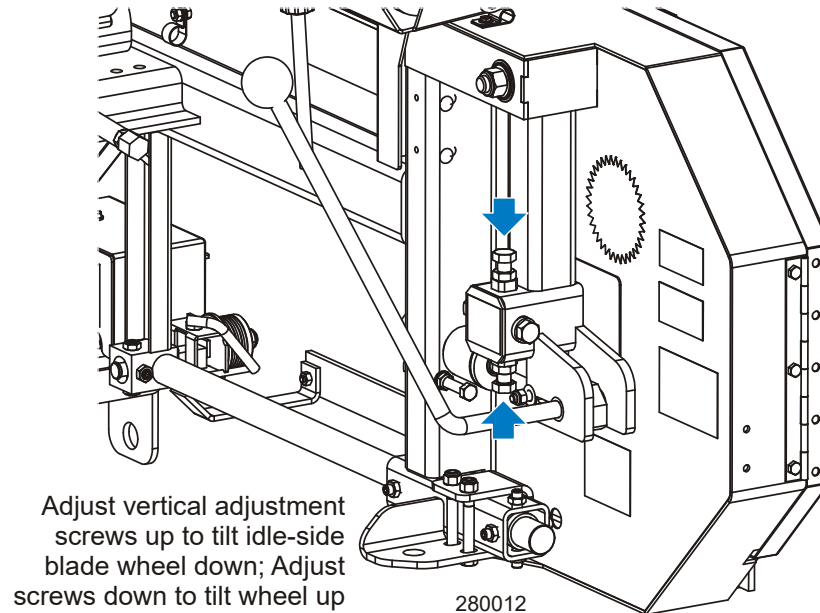


FIG. 7-14

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

See **Figure 7-15**. 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]).

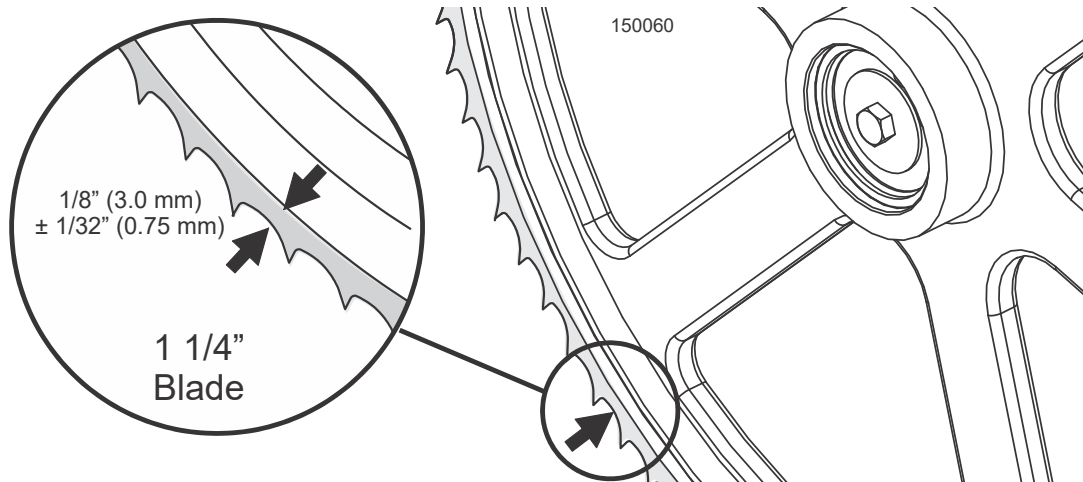


FIG. 7-15

See **Figure 7-16**. 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.

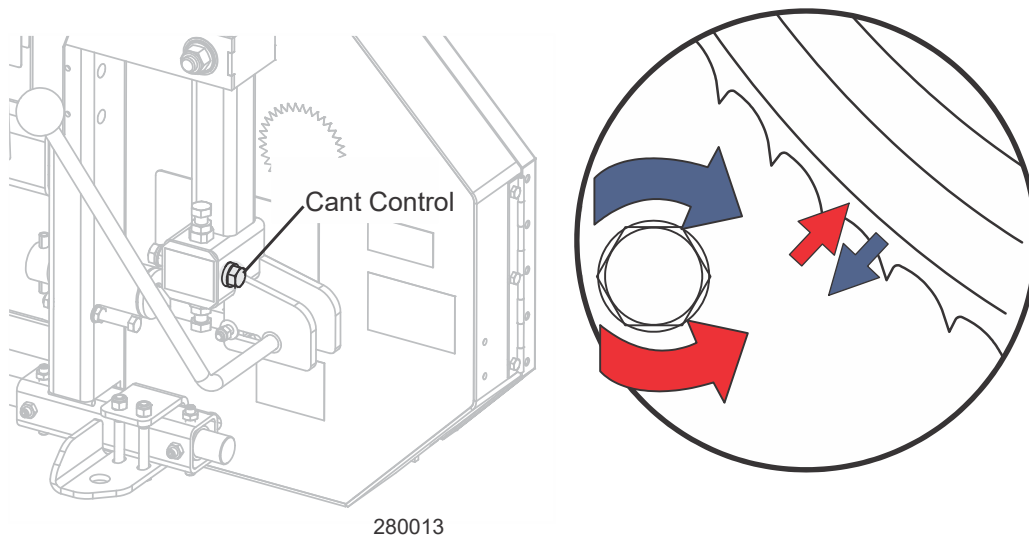


FIG. 7-16

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 7-17**. 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 quar-

7 Sawmill Alignment

Bed Rail Adjustment

ter turn. Loosen the jam nut on the left adjustment screw and tighten the screw. Tighten the left and right jam nuts.

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

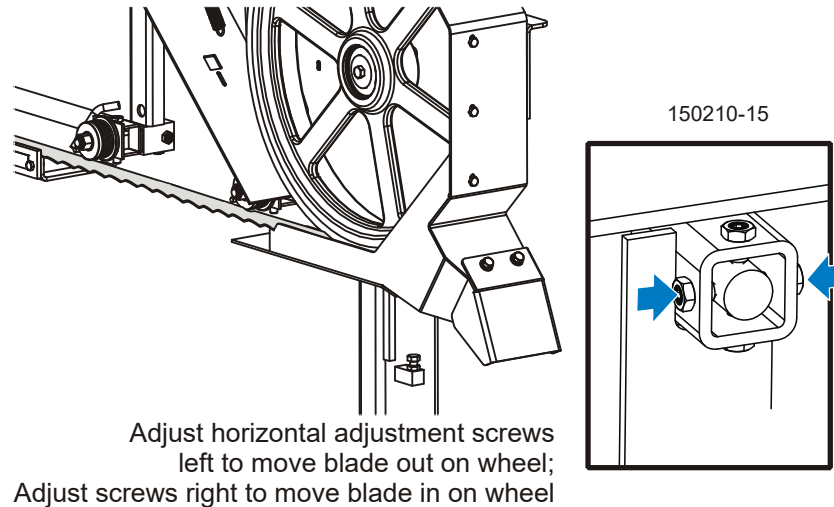


FIG. 7-17

Bed Rail Adjustment

1. Move the clamp so it is 10" (254mm) from the clamp stop. Adjust the clamp down to its lowest position. Move the saw head forward until it is positioned over the clamp. Raise the saw head until the blade measures 15 5/16" (385 mm) from the clamp at its lowest position.
2. Adjust the front pivot rail 90° to the main bed tube.
3. Move the saw head to center the blade over the front pivot bed rail.
4. Measure the distance from the top of the pivot rail to the bottom of the blade. Make this measurement at each end of the pivot rail.
5. The two measurements should be 15" (375 mm).

See Figure 7-18. Loosen the locking set screws and turn the inner height adjustment nut to adjust the height of the inner end of the pivot rail. Loosen the jam nut and turn the outer adjustment bolt to adjust the height of the outer end of the pivot rail.

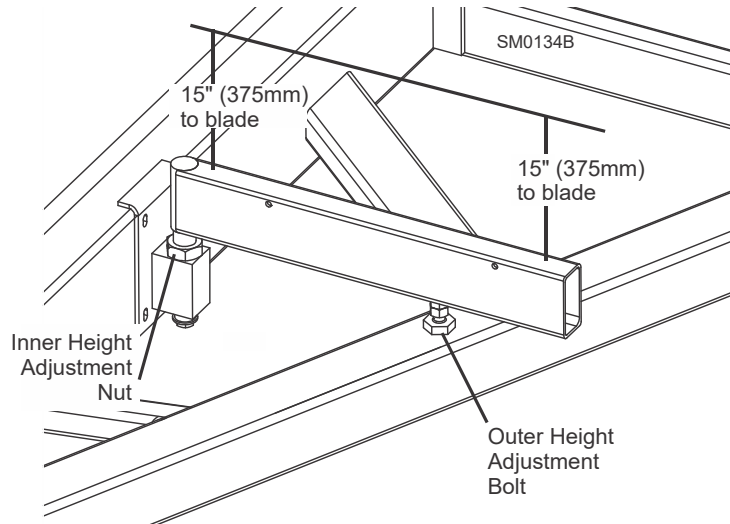


FIG. 7-18

6. Move the saw head so the blade is positioned over the center of the front main bed rail.
7. Measure the distance between the bottom of the blade and the bed rail at each end of the bed rail. The bed rail should measure 15" (375 mm) from the blade at each end of the rail.

See Figure 7-19. Loosen the bed rail clamping bolts and turn the adjustment bolts to move the bed rails to the blade if necessary. Retighten the clamping bolts and adjustment bolt jam nuts.

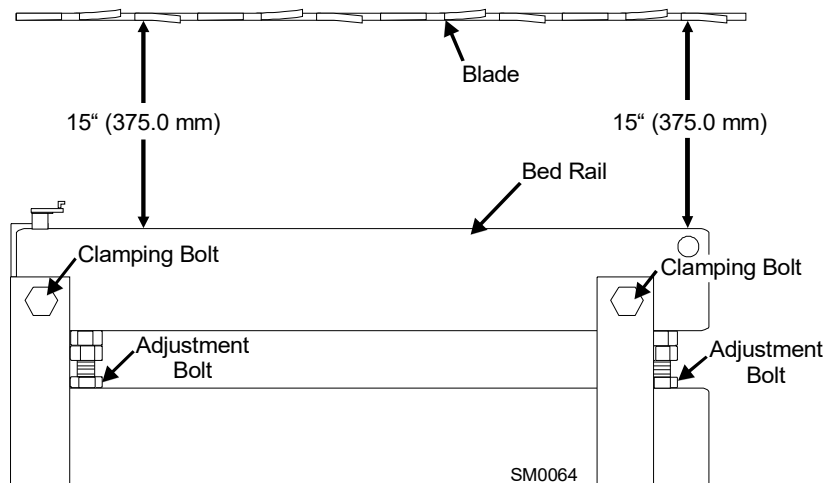


FIG. 7-19

8. Without adjusting the saw head height, check the three remaining main bed rails and the rear pivot rail. Adjust them so that all measure the same distance from the blade at both ends of the bed rail.

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.

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.

See Figure 7-20.

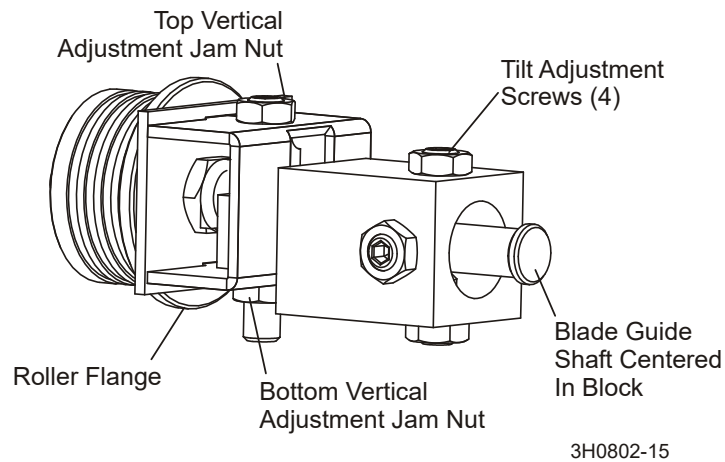


FIG. 7-20

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.

7 Sawmill Alignment

Blade Guide Arm Alignment

1. Adjust the blade guide arm out to 1/2" (13 mm) from fully open.
2. 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. Adjust the blade guide arm in all the way

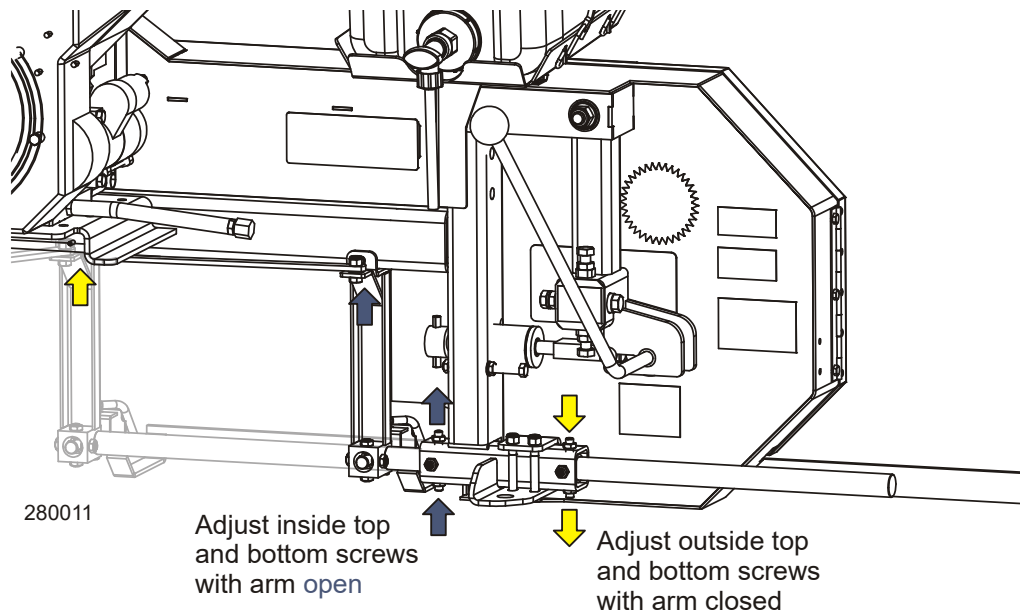


FIG. 7-20

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 to ensure the arm moves easily in and out.

See Figure 7-21. 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.

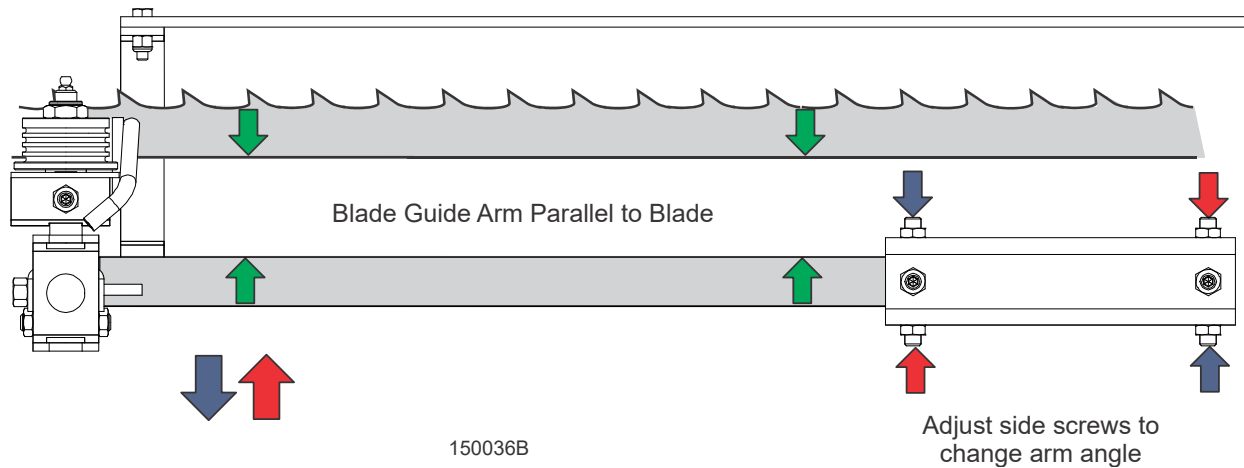


FIG. 7-21

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 Deflection

7. 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. Make sure the two vertical adjustment set screws are threaded into the blade guide shaft until they touch each other.

7 Sawmill Alignment

Blade Guide Vertical Tilt Alignment

See **Figure 7-22**. 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.

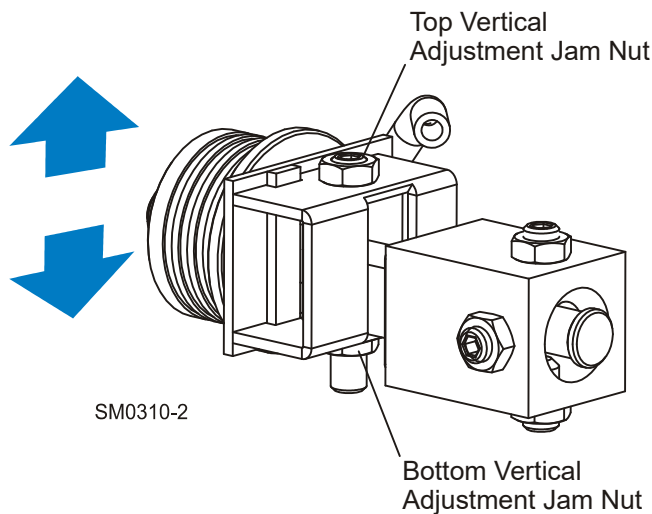


FIG. 7-22

8. Repeat for the other blade guide.

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

Blade Guide Vertical Tilt Alignment

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

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

1. Open the adjustable blade guide arm 1/2" (13 mm) from full open.
2. 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 7-23.

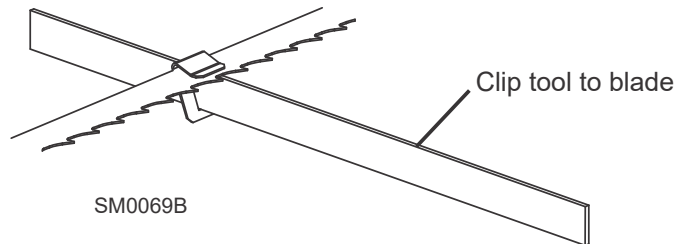


FIG. 7-23

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.

See Figure 7-24. 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.

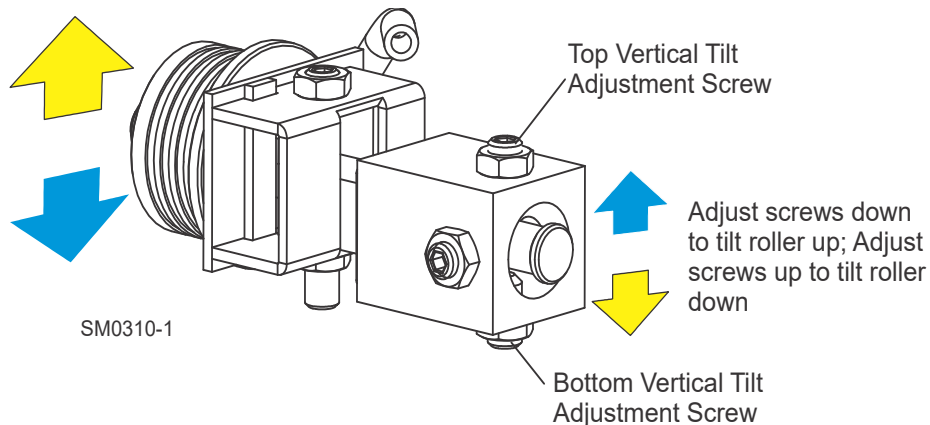


FIG. 7-24

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 7-25.

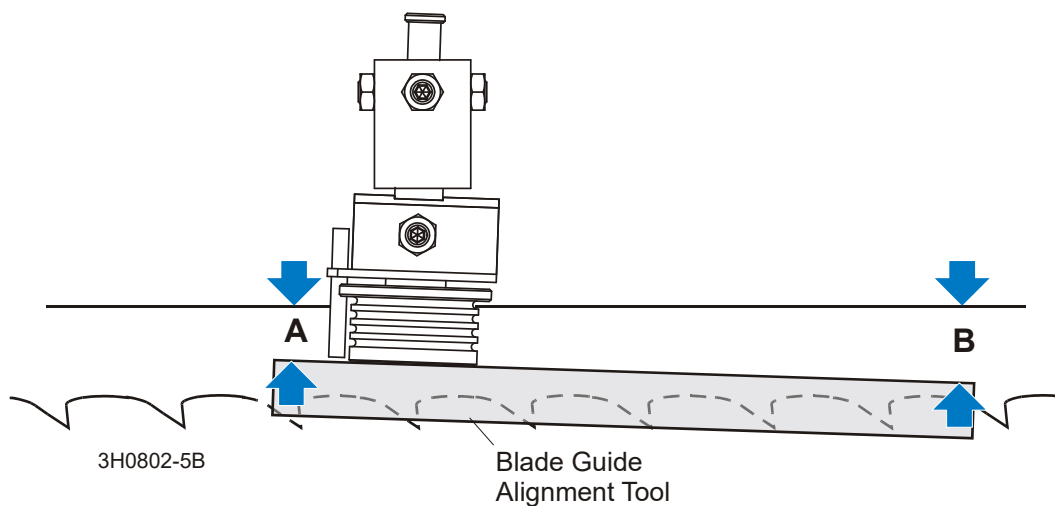


FIG. 7-25

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' \pm 1/8" [3 mm]).

See Figure 7-26. 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.

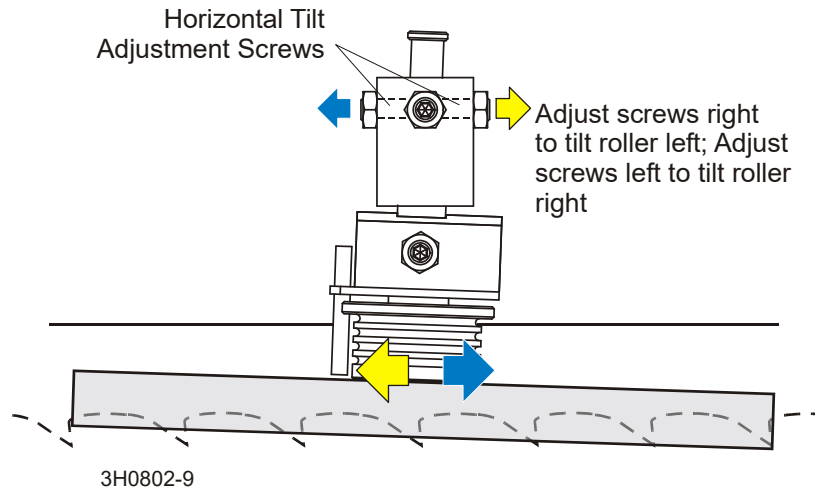


FIG. 7-26

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.

7 Sawmill Alignment

Side Support Alignment

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.

See Figure 7-27. Loosen the top and one side screw shown. Tap the blade guide forward or backward until properly positioned. Retighten the screws and jam nuts.

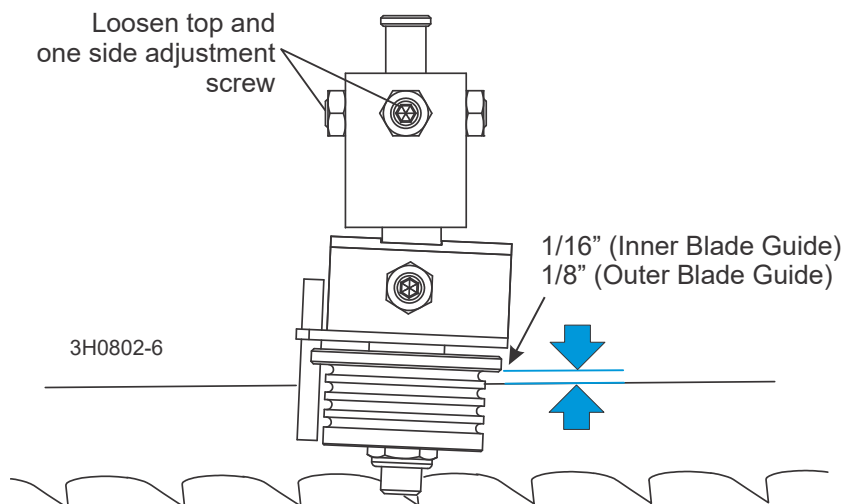


FIG. 7-27

2. 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.

Side Support Alignment

Logs and boards are clamped against the side supports when sawing. The sides 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 7-28. 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.

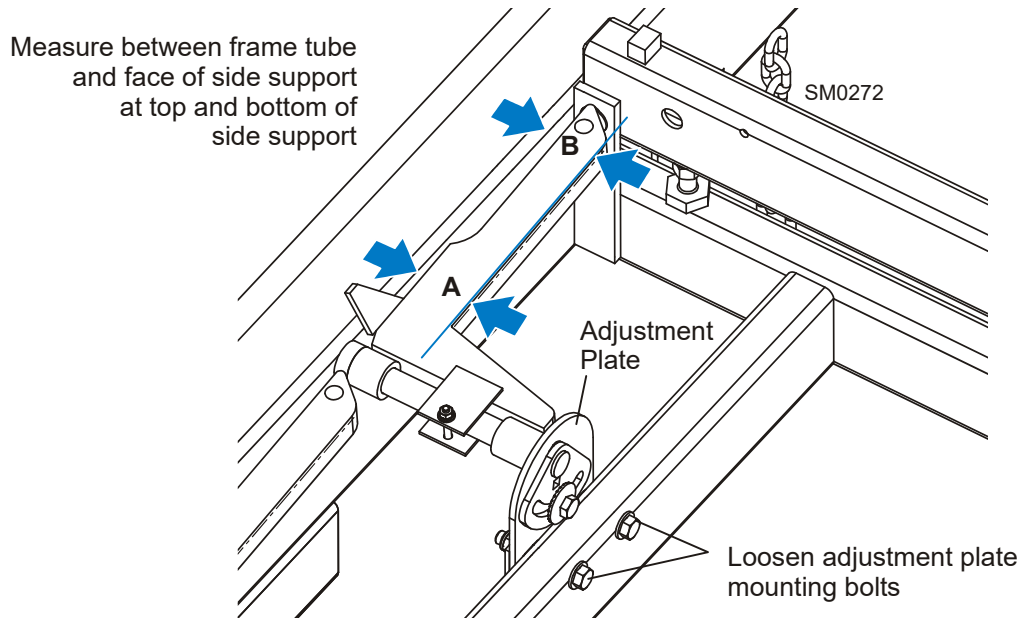


FIG. 7-28

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.

7 Sawmill Alignment

Clamp Stop/Stop Bolt Adjustment

See Figure 7-29. Loosen the side support mounting bolt. Use a 3/8" ratchet to rotate the pin until the side support is square to the bed.

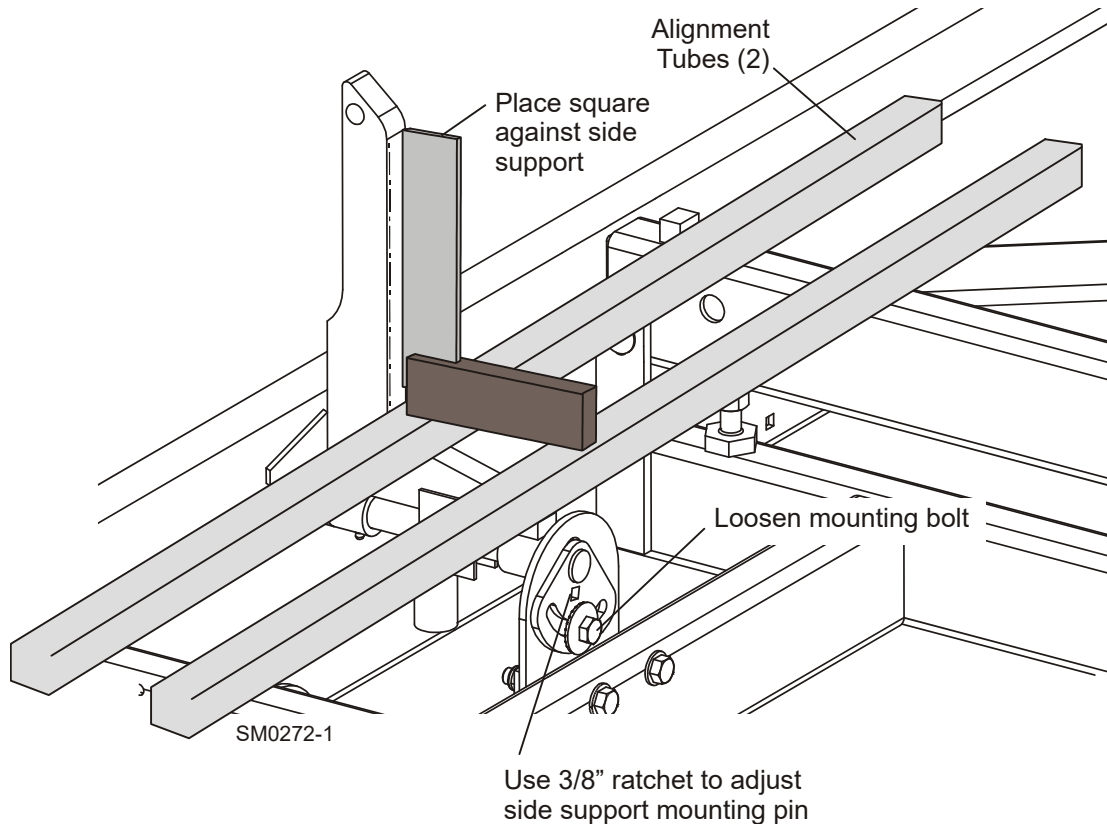


FIG. 7-29

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

Clamp Stop/Stop Bolt Adjustment

1. Once the side supports are aligned, pivot them down to their horizontal position.
2. Tie a string to the stop block at the first bed rail. Stretch the string toward the rear of the frame and tie to the stop block at the last bed rail.

See Figure 7-30. Loosen the clamp stop bolts and adjust the clamp stop until it touches the string. Loosen the jam nut and adjust the bolt on the middle-rear bed rail until it touches the string.

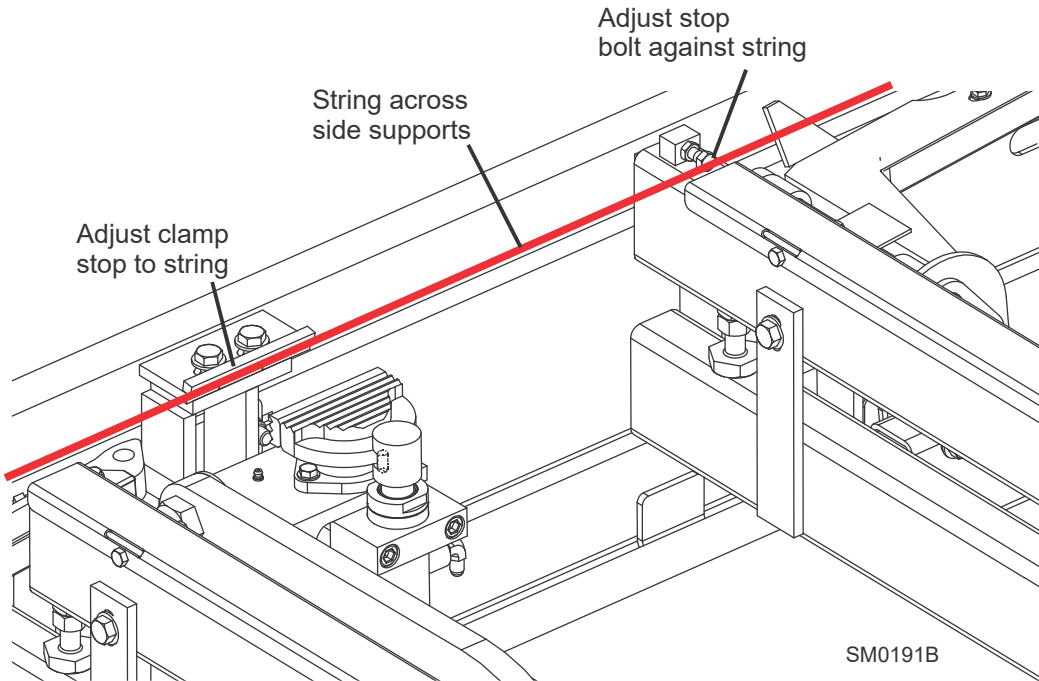


FIG. 7-30

Saw Head Tilt

As the blade enters a wide log or cant, the outside of the saw head will drop down slightly. To compensate for the drop, the saw head is adjusted 1/16" (1.5 mm) higher at the outside.

7 Sawmill Alignment

Saw Head Tilt

1. Move the saw carriage so the blade is positioned over a bed rail. Adjust the blade guide arm to 1/2" (13 mm) from full open. The saw head should still be adjusted so the blade is 14 3/4" (375 mm) above the bed rails.

See Figure 7-31.

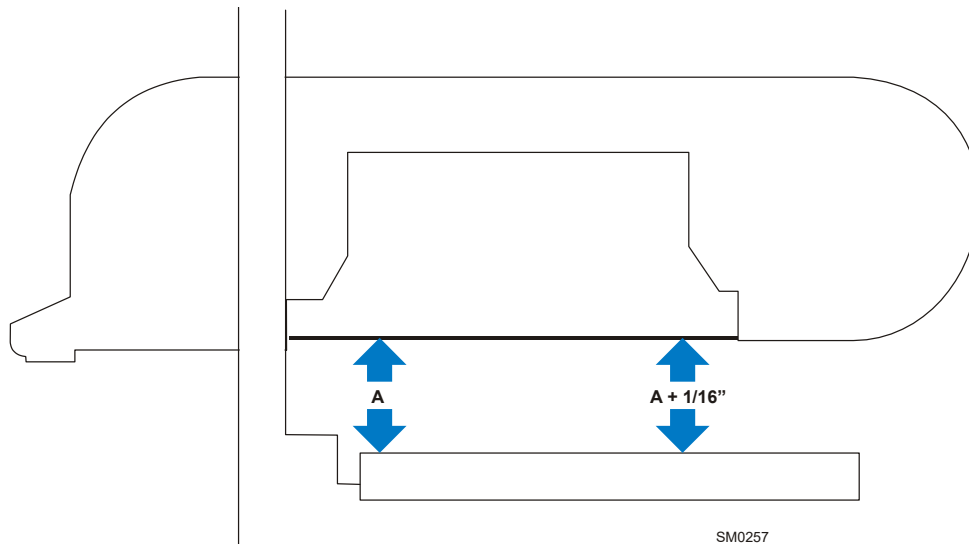


FIG. 7-31

2. Measure from the blade to the bed rail near the outer blade guide assembly.

See Figure 7-32. To adjust the saw head tilt, use the horizontal adjustment nuts. To raise the outside of the saw head, tighten the two adjustment nuts. Recheck the measurement

from the blade to the bed rails and adjust the horizontal adjustment nuts until the outside of the saw head is $1/16"$ (1.5mm) higher than the inside.

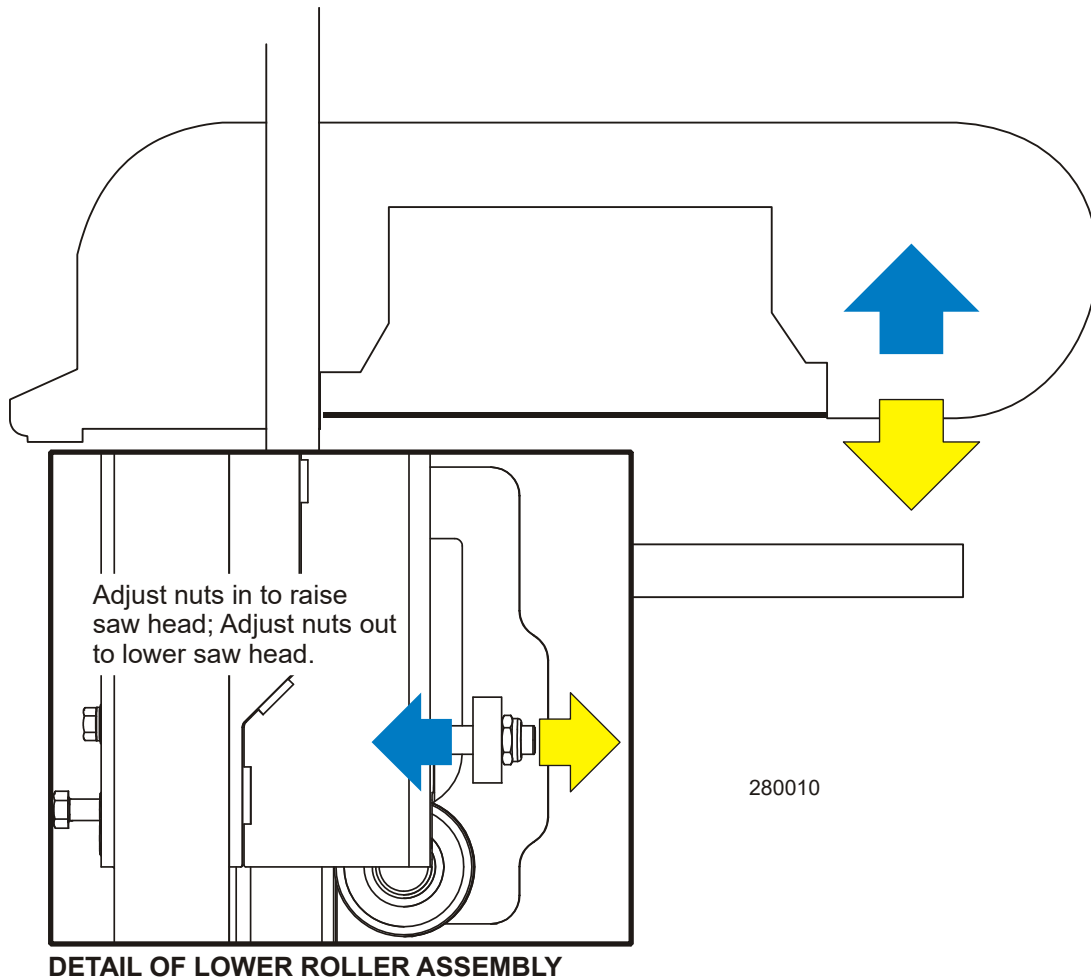


FIG. 7-32

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 7-33. Loosen the indicator bracket mounting bolts. Adjust the bracket up or down until the indicator is aligned with the correct mark on the scale (+0 $-1/32$ [0.8 mm]).

7 Sawmill Alignment

Blade Height Scale Adjustment

Retighten the bracket mounting bolts.

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

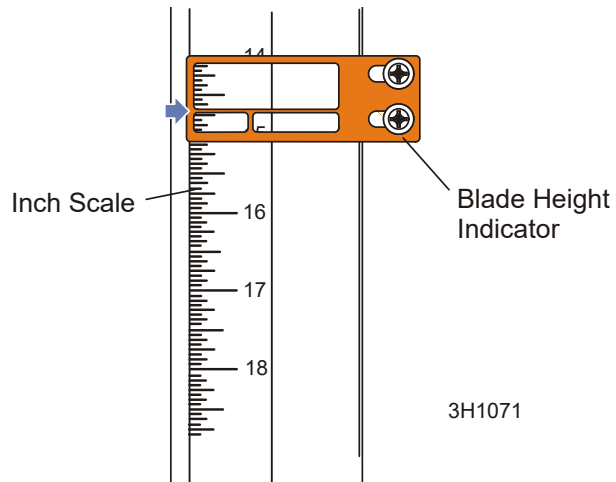
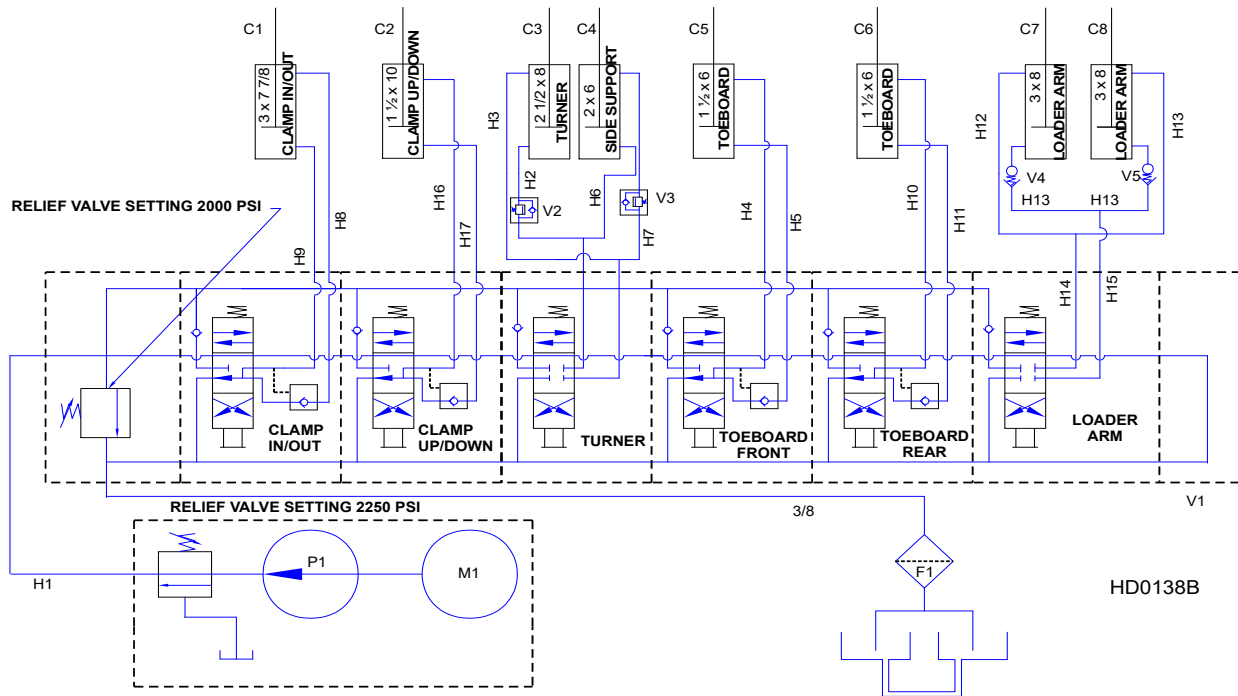


FIG. 7-33

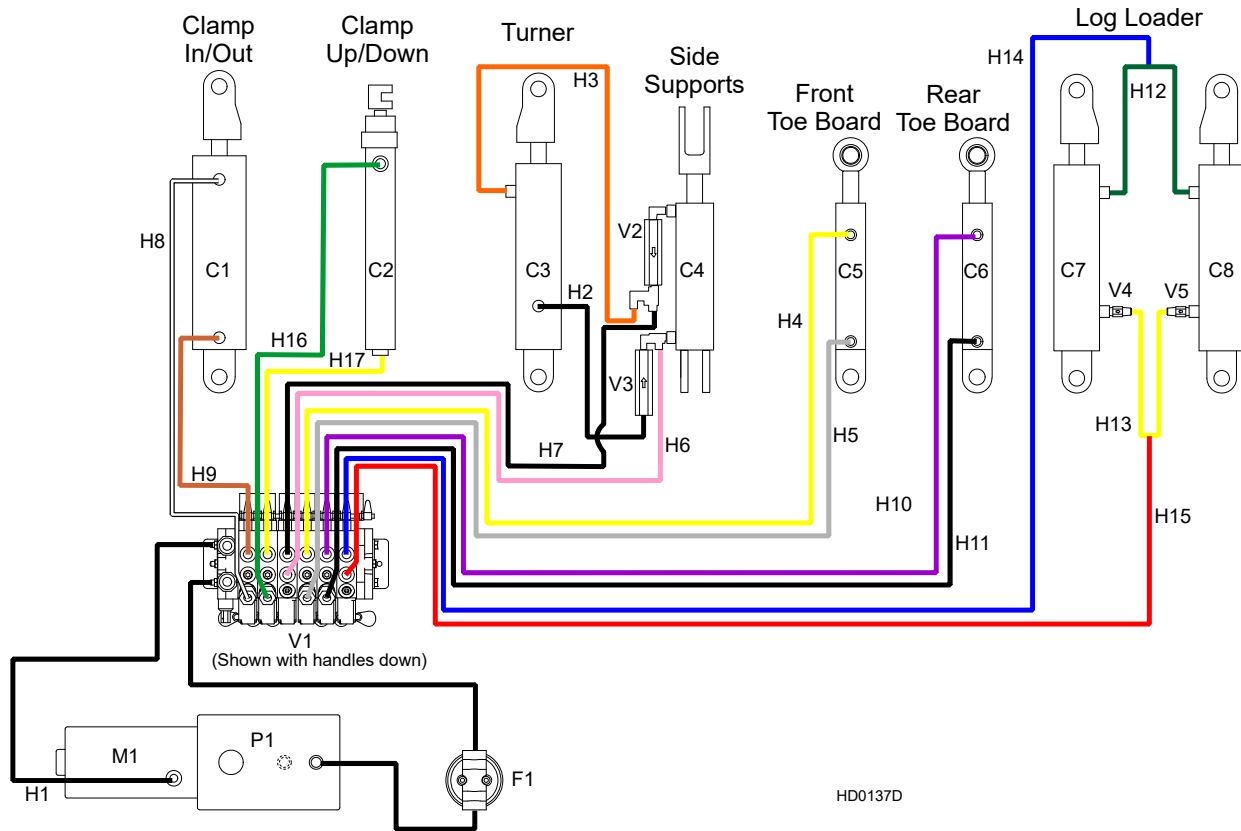
SECTION 8 HYDRAULIC INFORMATION

8.1 Hydraulic Schematic



HYDRAULIC SCHEMATIC.

8.2 Hydraulic Layout Diagram



HYDRAULIC LAYOUT DIAGRAM.

8.3 Hydraulic Components

ID	Wood-Mizer Part.#	Description
C1	017275	Hyd. Cylinder, 3" Bore X 7" Stroke
C2	015050	Hyd. Cylinder, 1 1/2" Bore X 10" Stroke
C3, C4	014482	Hyd. Cylinder, 1 1/2" Bore x 6" Stroke
C5	P12846	Hyd. Cylinder, 2 1/2" Bore X 8" Stroke
C6	P12845	Hyd. Cylinder, 2" Bore X 6" Stroke
C7, C8	P12847	Hyd. Cylinder, 3" Bore X 8" Stroke
F1	P20301	Filter, Hydraulic Fluid Cartridge
M1	052807	Motor, Iksra Hydraulic Pump

P1	P12701	Hydraulic Pump, With Motor
V1	015260	Valve, 6-Section Hidroirma
V2, V3	A09207	Sequence Valve
V4, V5	015750	Valve, Hydraulic 5GPM Velocity Fuse

8.4 Hydraulic Hoses

ID	Color Code	LENGTH "A"	Application	Wood-Mizer Part No.
H1	None	9"	1/4" Hydraulic Pump To Valve	014437
H2	Plain	27"	1/4" Log Turner Base	P12535
H3	Orange	18"	1/4" Log Turner Top	015704
H4	Yellow	95"	1/4" Front Toe Board Top (LT30HD)	P12540
		117"	1/4" Front Toe Board Top (LT40HD)	P12542
H5	Gray	95"	1/4" Front Toe Board Base (LT30HD)	P12540
		117"	1/4" Front Toe Board Base (LT40HD)	P12542
H6	Pink	159"	1/4" Side Support Base (LT30HD)	P12547
		181"	1/4" Side Support Base (LT40HD)	014788
H7	Plain	159"	1/4" Side Support Top (LT30HD)	P12547
		181"	1/4" Side Support Top (LT40HD)	014788
H8	White	135"	1/4" Clamp In/Out Top (LT30HD)	P12543
		157"	1/4" Clamp In/Out Top (LT40HD)	P12546
H9	Dark Orange	125"	1/4" Clamp In/Out Base (LT30HD)	014784
		151"	1/4" Clamp In/Out Base (LT40HD)	P12545
H10	Purple	196"	1/4" Rear Toe Board Top (LT30HD)	014791
		219"	1/4" Rear Toe Board Top (LT40HD)	018026
H11	Black	196"	1/4" Rear Toe Board Base (LT30HD)	014791
		219"	1/4" Rear Toe Board Base (LT40HD)	018026
H12	Green	62"	1/4" LOADING ARM BRANCH TOP	018020
H13	Yellow	64"	1/4" LOADING ARM BRANCH BASE	018021
H14	Blue	164"	1/4" Loading Arm Top (LT30HD)	P12548
		186"	1/4" Loading Arm Top (LT40HD)	P12550
H15	Red	164"	1/4" Loading Arm Bottom (LT30HD)	P12548
		186"	1/4" Loading Arm Bottom (LT40HD)	P12550
H16	Green	181"	1/4" Clamp Up/Down Top (LT30HD)	014788
		204"	1/4" Clamp Up/Down Top (LT40HD)	014788
H17	Yellow	173"	1/4" Clamp Up/Down Base (LT30HD)	P12549
		194"	1/4" Clamp Up/Down Base (LT40HD)	015692

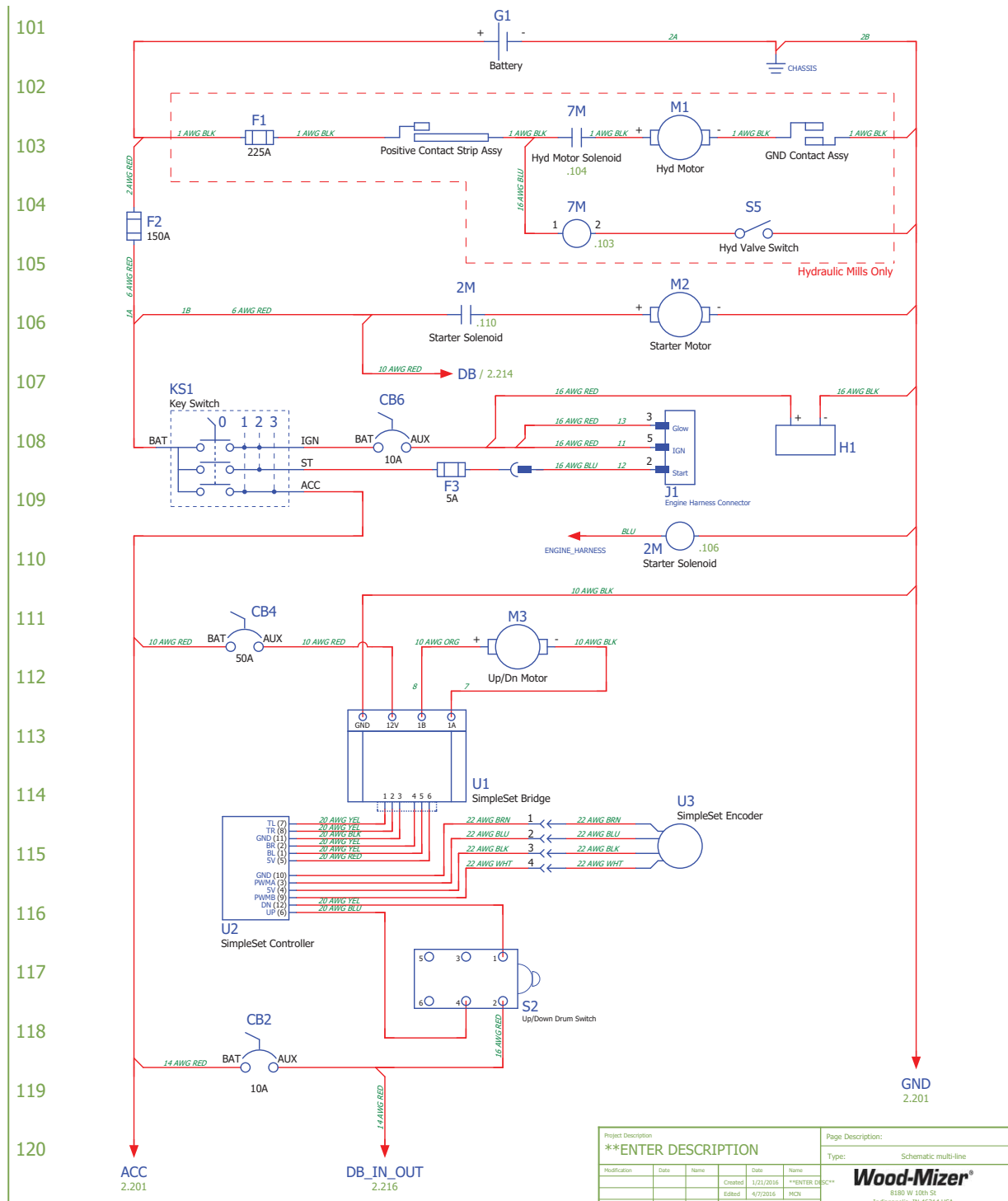


Electrical Information

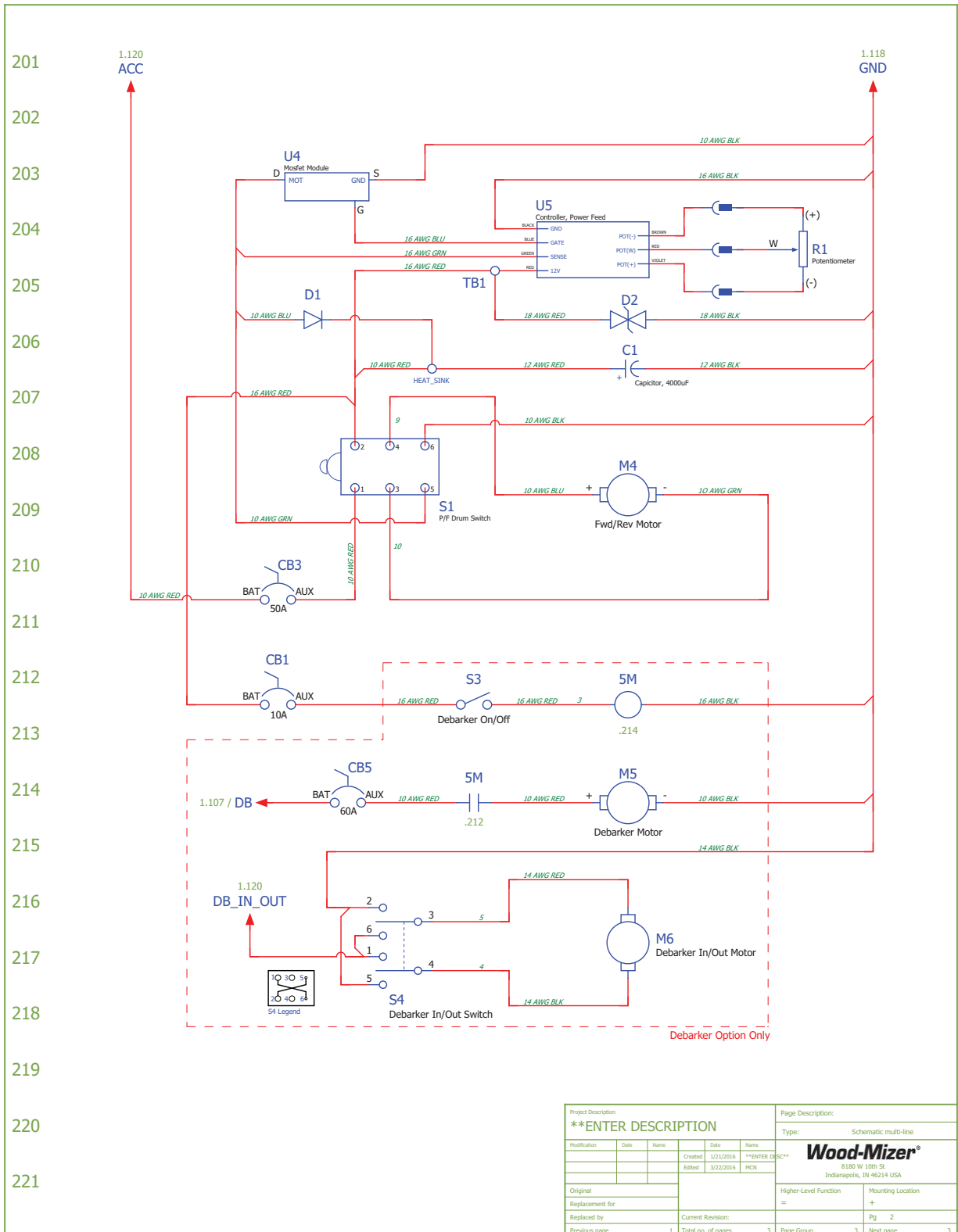
Wiring Diagrams, D24 (LT35 Rev. A6.08+/LT35HD Rev. A6.10+)

SECTION 9 ELECTRICAL INFORMATION

9.1 Wiring Diagrams, D24 (LT35 Rev. A6.08+/LT35HD Rev. A6.10+)



Project Description					Page Description:	
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Modification	Date	Name	Date	Name		
	Created		1/21/2016	**ENTER DESC**		
	Edited		4/7/2016	MCN		
Wood-Mizer® 8180 W. 19th St. Indianapolis, IN 46214 USA						



Project Description				Page Description:			
**ENTER DESCRIPTION				Type: Schematic multi-line			
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			3/22/2016	MCN		Indianapolis, IN 46214 USA	
Original						Higher-Level Function	Mounting Location
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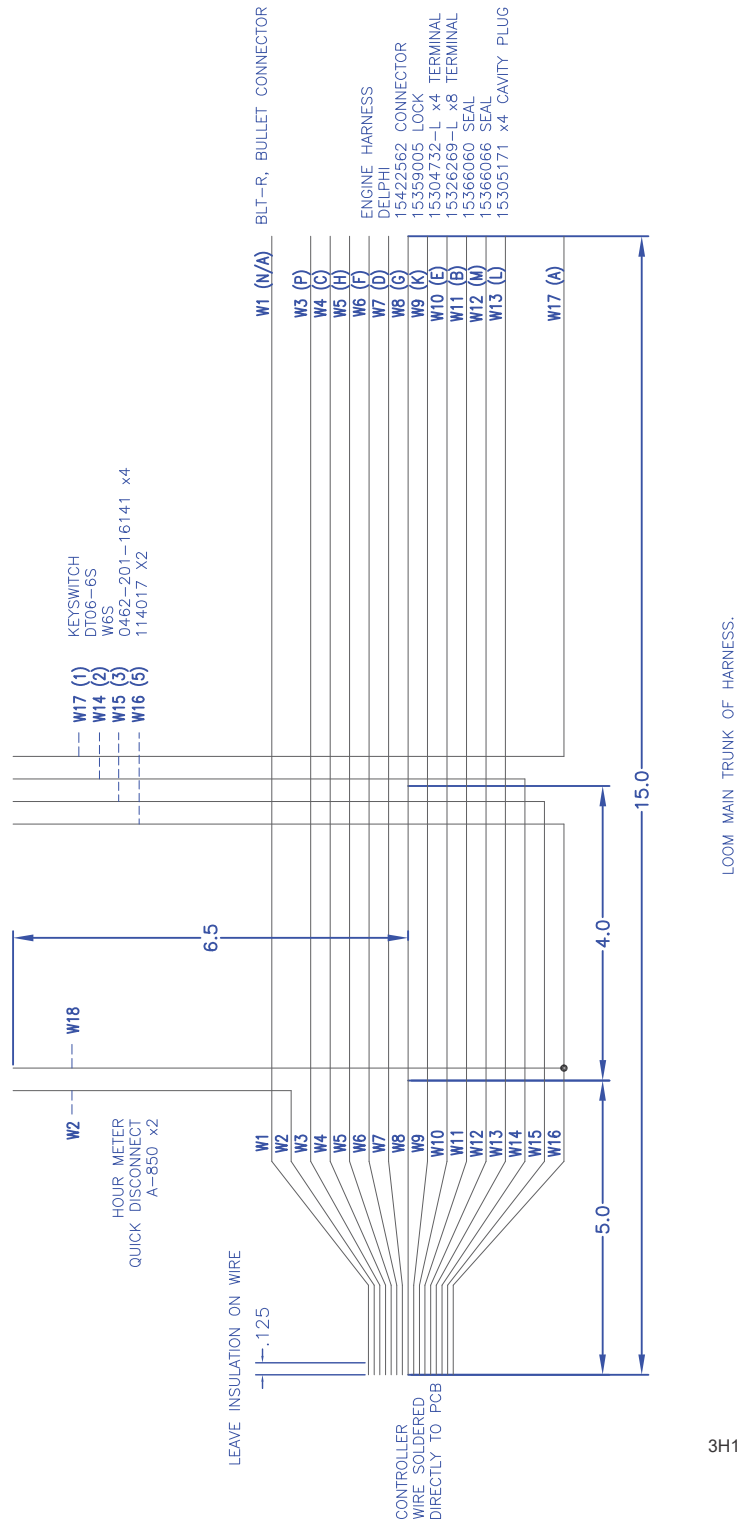
Electrical Information

Component List, D24 (LT35 Rev. A6.08+/LT35HD Rev. A6.10+)

9.2 Component List, D24 (LT35 Rev. A6.08+/LT35HD Rev. A6.10+)

Component List				
Item	Mfg. Part No.	Mfg.	Wood-Mizer Part No.	Description
5M, 7M	016371	Wood-Mizer	016371	Solenoid Kit, 200A 12V SPST Cont. Duty
C1	052365	Wood-Mizer	052365	Capacitor Assembly, P/F Filter
CB1	75105	Various	053464	Circuit Breaker, 10A Manual Reset
CB2	75105	Various	053464	Circuit Breaker, 10A Manual Reset
CB3	1648-009-050-006	Mechanical products	024256	Circuit Breaker, 50A
CB4	1648-009-050-006	Mechanical products	024256	Circuit Breaker, 50A
CB5	1648-009-050-006	Mechanical products	024256	Circuit Breaker, 50A
CB6	75105	Various	053464	Circuit Breaker, 10A Manual Reset
D1	052363	Wood-Mizer	052363	Diode Assembly
D2	052294	Wood-Mizer	052294	Suppressor Assembly, 92+ Power Feed
F1	MEG225	Littelfuse	053339	MEGA Fuse 225A
F2	MEG150	Littelfuse	052370-150	MEGA Fuse 150A
F3	LTFS-0287005.L	Littelfuse	024150-5	Fuse, 5A ATO Blade Tan
G1	24M7 wet	East Penn Manufacturing (Deka)	P12315	Battery, 12V 24M7
H1	N430-0200-8111 & 801-416 015401	Sendec	015401	Meter, Hour
KS1	1218 W/BOOT	---	P04350	Switch, Key
M1	4085-018	Iskra	038683	Motor, Hydraulic Pump
M3	4085-018	Current Applications	006747	0.50 HP DC Motor
M4	4085-018	Current Applications	006747	0.50 HP DC Motor
M5	4085-018	Current Applications	006747	0.50 HP DC Motor
R1	076050	Wood-Mizer	076050	Potentiometer, 1K
S2	2601AF2S12	Schneider Electric	---	Drum Switch, U/D
S5	024198	Wood-Mizer	024198	Switch, Hydraulic Micro
U1	053373	Wood-Mizer	053373	Bridge, SS Key
U2	053774	Key Electronics	053774	Controller, SimpleSet Key
U3	074021	Wood-Mizer	074021	Encoder Assembly, SimpleSet
U4	024387	Key Electronics	024387	Module, Mosfet
U5	024396	Key Electronics	024396	Controller, Power Feed

9.3 Engine Harness Wiring, D24



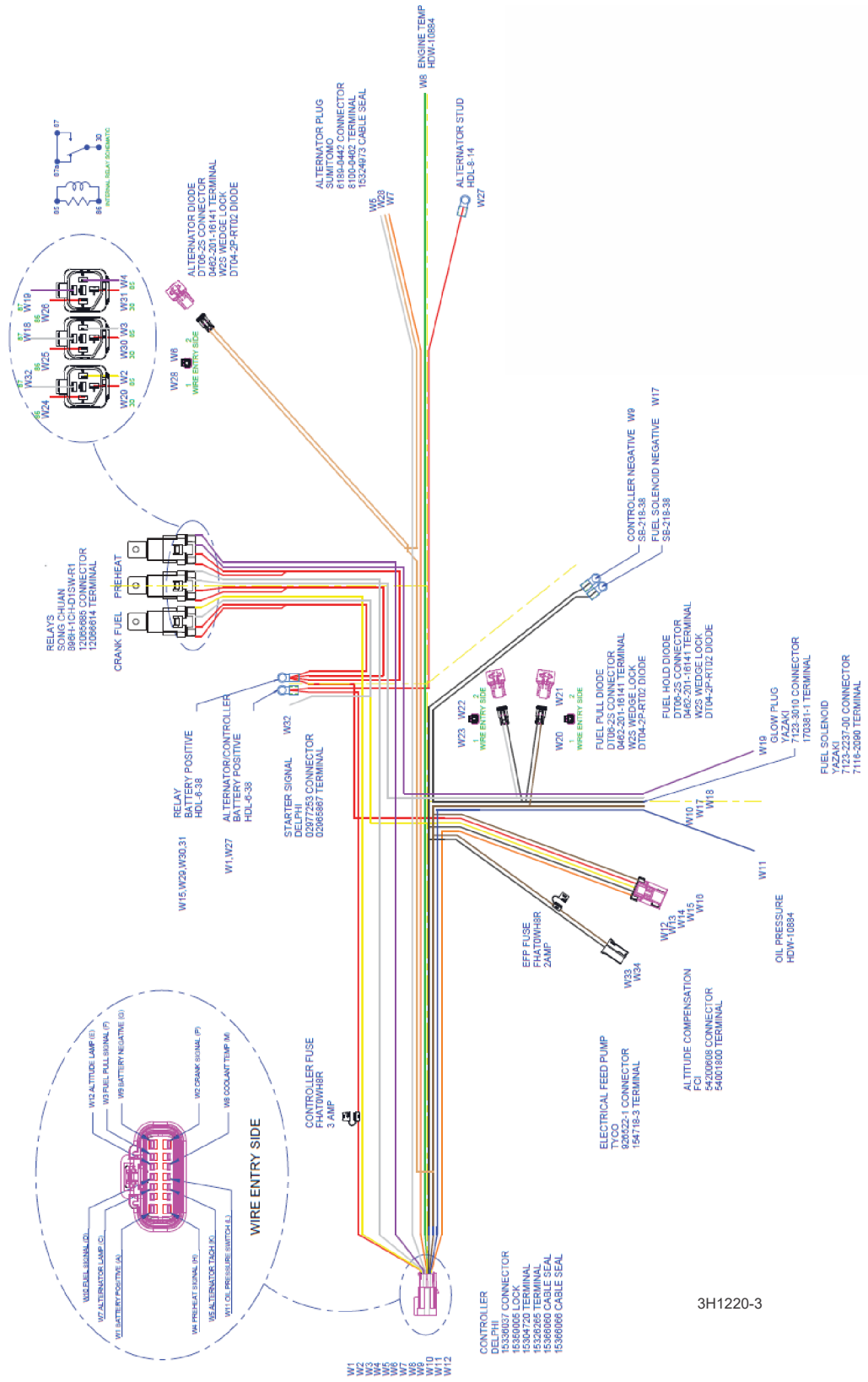
3H1220-1

3H1220-2

WIRE NUMBER	COLOR	WIRE GAUGE	LENGTH (INCHES-REF)	END A CONNECTOR	END A TERMINAL/SEAL	END A PORT	END B CONNECTOR	END B TERMINAL/SEAL	END B PORT	WIRE FUNCTION
W1	BLACK	18AWG	15.0	-	-	1	-	BLT-R	-	PREHEAT INTERVAL SELECT
W2	BLACK	18AWG	11.5	-	-	2	-	A-850	-	HOURLY METER GROUND
W3	BLACK	18AWG	15.0	-	-	3	15422562	15304732-L	P	STARTER
W4	BLACK	18AWG	15.0	-	-	4	15422562	15326269-L	C	ALT CHARGE LAMP
W5	BLACK	18AWG	15.0	-	-	5	15422562	15304732-L	H	GLOW PLUGS
W6	BLACK	18AWG	15.0	-	-	6	15422562	15326269-L	F	FUEL PULL
W7	BLACK	18AWG	15.0	-	-	7	15422562	15326269-L	D	FUEL HOLD
W8	BLACK	18AWG	15.0	-	-	8	15422562	15304732-L	G	BATTERY NEGATIVE, B-
W9	BLACK	18AWG	15.0	-	-	9	15422562	15326269-L	K	ALT TACH
W10	BLACK	18AWG	15.0	-	-	10	15422562	15326269-L	E	HIGH ALTITUDE
W11	BLACK	18AWG	15.0	-	-	11	15422562	15326269-L	B	N/A
W12	BLACK	18AWG	15.0	-	-	12	15422562	15326269-L	M	HIGH TEMP SWITCH
W13	BLACK	18AWG	15.0	-	-	13	15422562	15326269-L	L	LOW PRESSURE SWITCH
W14	BLACK	18AWG	11.5	-	-	14	DT06-6S	0462-201-16141	2	KEY CRANK
W15	BLACK	18AWG	11.5	-	-	15	DT06-6S	0462-201-16141	3	KEY ACCESSORY
W16	BLACK	18AWG	11.5	-	-	16	DT06-6S	0462-201-16141	5	KEY IGNITION
W17	BLACK	18AWG	15.0	DT06-6S	0462-201-16141	1	15422562	15304732-L	A	BATTERY POSITIVE, B+
W18	BLACK	18AWG	8.0	-	A-850	-	SPLICE W/W16	-	-	HOURLY METER B+

* ALL WIRES TO BE MARKED WITH WIRE NUMBERS, VISIBLE WHEN IN CONNECTOR.

WIRE NUMBER	WIRE FUNCTION	PANEL FEATURE
W1	PREHEAT INTERVAL SELECT	4S/10S. (DEFAULT 4S). GROUND INPUT FOR 10S.
W3	STARTER	OVER CRANK PROTECTION: CRANK SIGNAL 30S MAX. CRANK SIGNAL DISABLED DURING ENGINE RUN.
W12	HIGH TEMP SWITCH	HIGH COOLANT TEMPERATURE SHUTDOWN INPUT SIGNAL.
W13	LOW PRESSURE SWITCH	LOW OIL PRESSURE SHUTDOWN: 10S SHUTDOWN BYPASS DURING ENGINE START.



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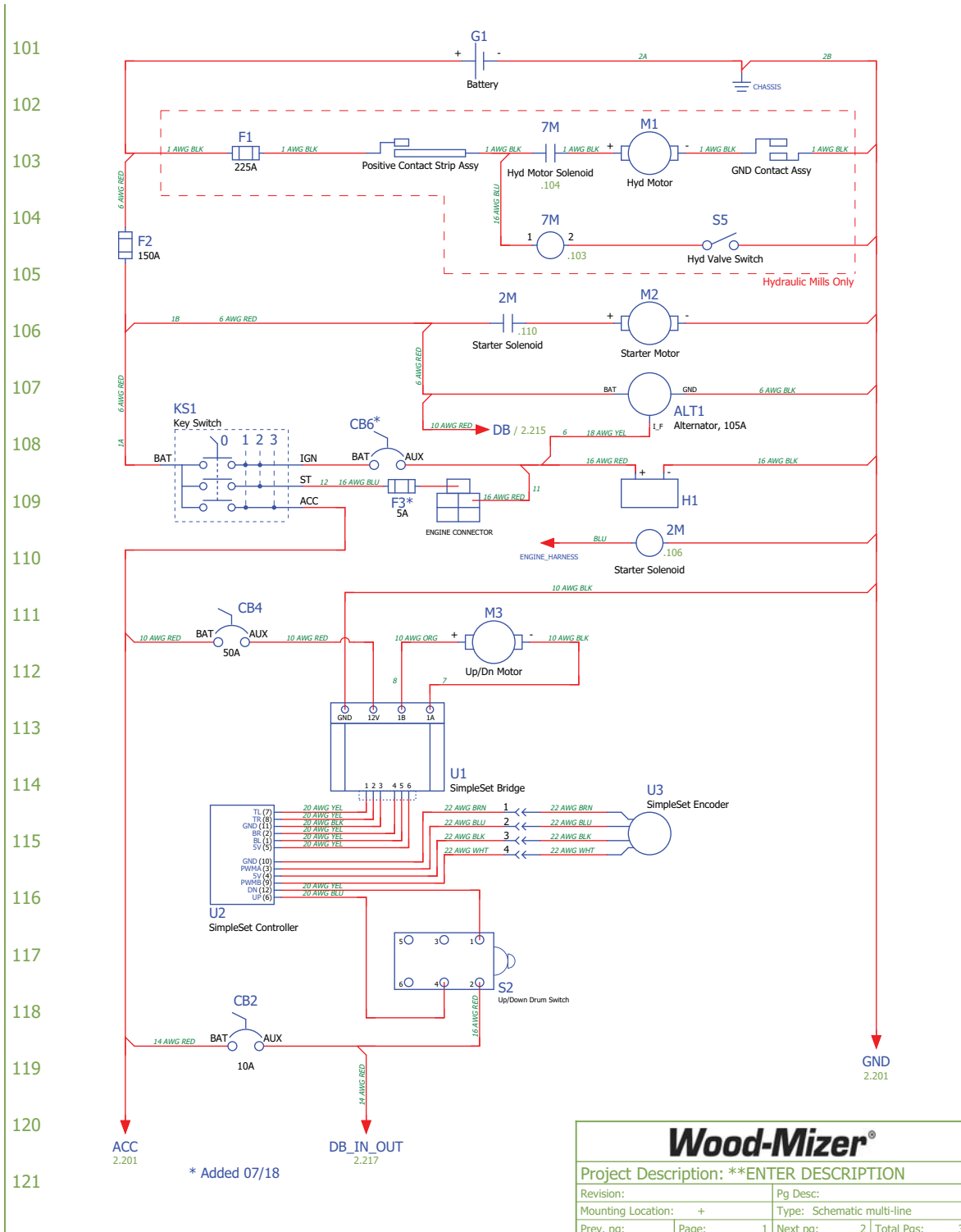
Electrical Information

Engine Harness Wiring, D24

WIRE NUMBER	COLOR	WIRE GAUGE	LENGTH (INCHES-REF)	END A CONNECTOR	END A TERMINAL/SEAL	END A PORT	END B CONNECTOR	END B TERMINAL/SEAL	END B PORT	WIRE FUNCTION
W1	RED	16 AWG	41.0	15336037	15304720	A	N/A	HDL-6-38	N/A	CONTROLLER BATTERY POSITIVE, B+
W2	YELLOW/RED	16 AWG	53.0	15336037	15304720	P	12065685	12066614	85	CRANK SIGNAL
W3	WHITE	16 AWG	53.0	15336037	15326265	F	12065685	12066614	85	FUEL PULL SIGNAL
W4	VIOLET/RED	16 AWG	53.0	15336037	15304720	H	12065685	12066614	85	GLOW PLUG SIGNAL
W5	WHITE	16 AWG	59.0	15336037	15326265	K	6189-0442	8100-0462	3	ALTERNATOR TACH
W6	TAN	16 AWG	55.0	SPLICE WW10	N/A	N/A	DT06-2S	0462-201-16141	2	ALTERNATOR EXCITE
W7	ORANGE/WHITE	16 AWG	59.0	15336037	15326265	C	6189-0442	8100-0462	1	ALTERNATOR CHARGE LAMP
W8	GREEN	16 AWG	65.0	15336037	15326265	M	N/A	HDW-10884	N/A	HIGH TEMPERATURE SWITCH
W9	BLACK	16 AWG	45.0	15336037	15304720	G	N/A	SB-218-38	N/A	CONTROLLER BATTERY NEGATIVE, B-
W10	BROWN/RED	16 AWG	41.0	15336037	15326265	D	7123-2237-00	7116-2090	R	FUEL HOLD SIGNAL
W11	BLUE	16 AWG	47.0	15336037	15326265	L	N/A	HDW-10884	N/A	LOW PRESSURE SWITCH
W12	ORANGE/RED	16 AWG	66.0	15336037	15326265	E	54200608	54001800	3	HIGH ALTITUDE SIGNAL
W13	BLACK	16 AWG	38.0	SPLICE WW9	N/A	N/A	54200608	54001800	2	ALTITUDE COMPENSATION GROUND, B-
W14	YELLOW/RED	16 AWG	46.0	SPLICE WW132	N/A	N/A	54200608	54001800	6	ALTITUDE COMPENSATION STARTER SIGNAL
W15	RED	14 AWG	48.0	N/A	HDL-6-38	N/A	54200608	54001800	4	ALTITUDE COMPENSATION POSITIVE, B+
W16	BROWN/RED	16 AWG	38.0	SPLICE WW10	N/A	N/A	54200608	54001800	5	ACCESSORY BATTERY POSITIVE, B+
W17	BLACK	16 AWG	26.0	N/A	SB-218-38	N/A	7123-2237-00	7116-2090	B	FUEL SOLENOID GROUND, B-
W18	WHITE	14 AWG	32.0	12065685	12066614	87	7123-2237-00	7116-2090	W	FUEL PULL SIGNAL
W19	VIOLET/RED	14 AWG	38.0	12065685	12066614	87	7123-3010	7116-3010	1	GLOW PLUG SIGNAL
W20	BROWN/RED	16 AWG	5.0	SPLICE WW16	N/A	N/A	DT06-2S	0462-201-16141	1	FUEL HOLD SIGNAL, DIODE
W21	BLACK	16 AWG	5.0	SPLICE WW17	N/A	N/A	DT06-2S	0462-201-16141	2	BATTERY NEGATIVE, B-
W22	BLACK	16 AWG	5.0	SPLICE WW17	N/A	N/A	DT06-2S	0462-201-16141	2	BATTERY NEGATIVE, B-
W23	WHITE	16 AWG	5.0	SPLICE WW18	N/A	N/A	DT06-2S	0462-201-16141	1	FUEL PULL SIGNAL, DIODE
W24	RED	16 AWG	6.0	SPLICE WW29	N/A	N/A	12065685	12066614	86	CRANK RELAY COIL POSITIVE, B+
W25	RED	16 AWG	6.0	SPLICE WW30	N/A	N/A	12065685	12066614	86	FUEL RELAY COIL POSITIVE, B+
W26	RED	16 AWG	6.0	SPLICE WW31	N/A	N/A	12065685	12066614	86	PREHEAT RELAY COIL POSITIVE, B+
W27	RED	8 AWG	30.0	N/A	HDL-8-14	N/A	N/A	HDL-6-38	N/A	ALTERNATOR BATTERY POSITIVE, B+
W28	TAN	16 AWG	36.0	DT06-2S	0462-201-16141	1	6189-0442	8100-0462	2	ALTERNATOR EXCITE
W29	RED	14 AWG	23.0	N/A	HDL-6-38	N/A	12065685	12066614	30	CRANK RELAY BATTERY POSITIVE, B+
W30	RED	14 AWG	23.0	N/A	HDL-6-38	N/A	12065685	12066614	30	FUEL RELAY BATTERY POSITIVE, B+
W31	RED	14 AWG	23.0	N/A	HDL-6-38	N/A	12065685	12066614	30	PREHEAT RELAY BATTERY POSITIVE, B+
W32	WHITE	16 AWG	23.0	12065685	12066614	87	02977253	02965867	N/A	CRANK SIGNAL
W33	BLACK	16 AWG	27.0	SPLICE WW9	N/A	N/A	926522-1	154718-3	2	BATTERY NEGATIVE, B-
W34	BROWN/RED	16 AWG	27.0	SPLICE WW10	N/A	N/A	926522-1	154718-3	1	FUEL HOLD SIGNAL

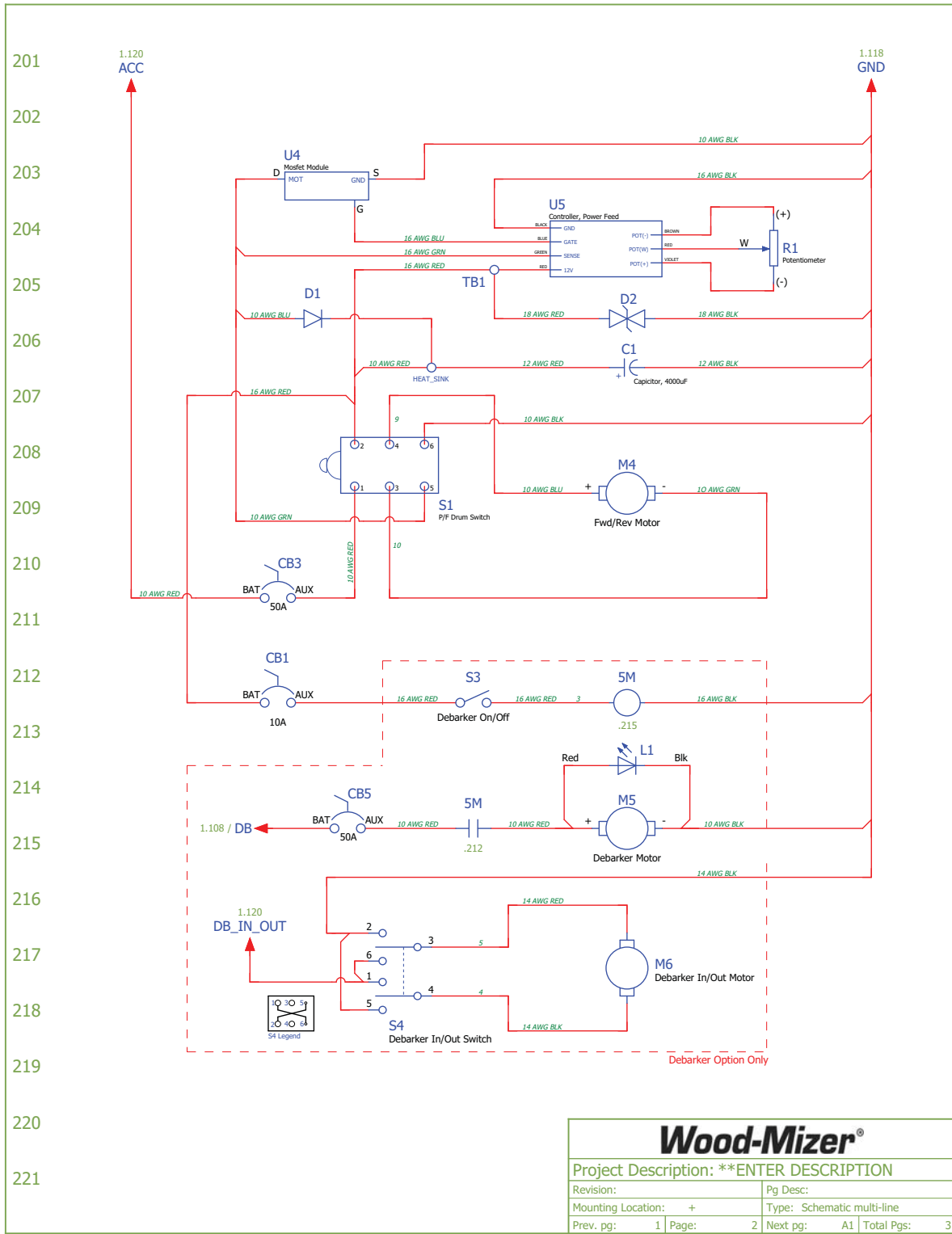
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9.4 Wiring Diagrams, G25 & D17 (Rev. A6.00+)



9 Electrical Information

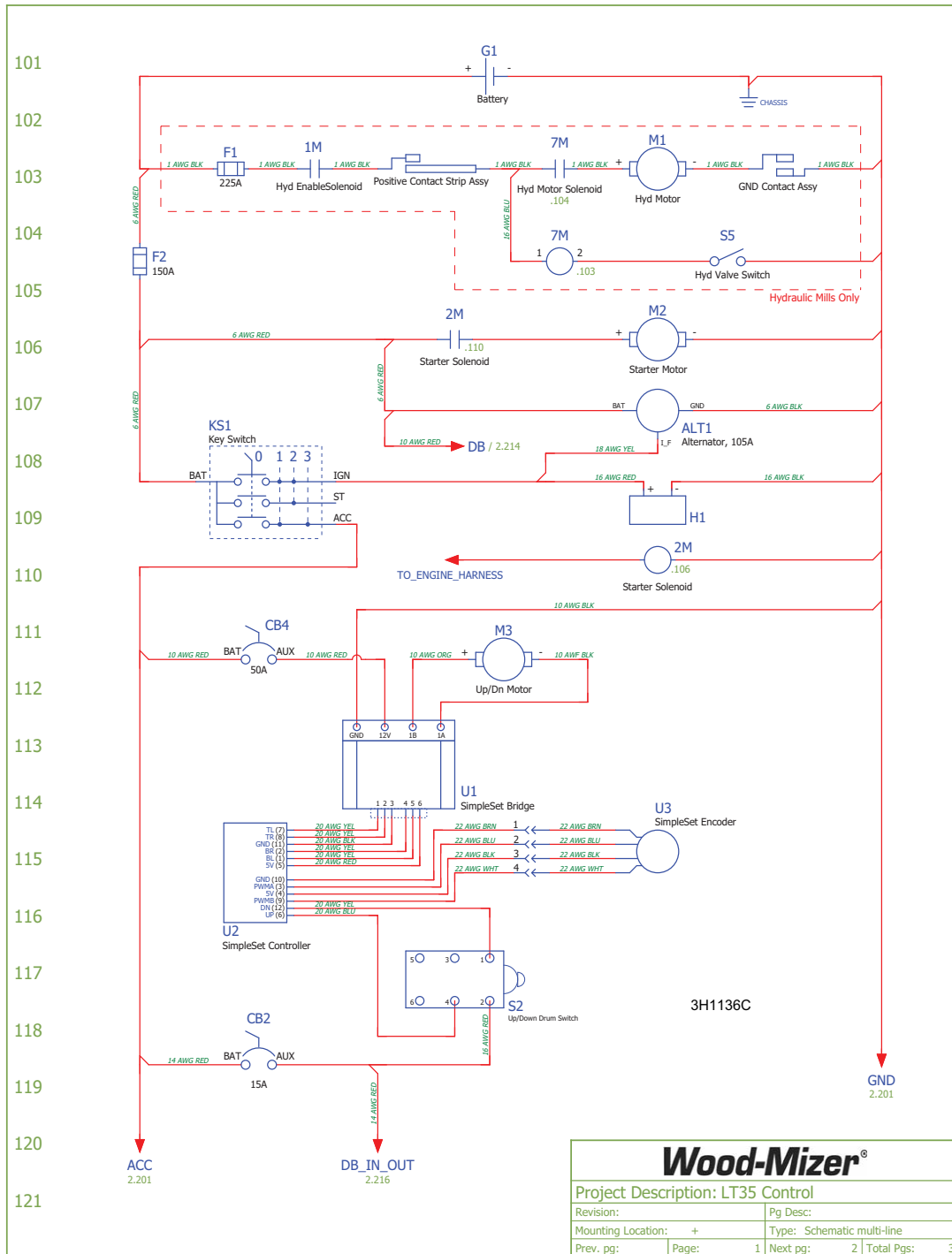
Wiring Diagrams, G25 & D17 (Rev. A6.00+)

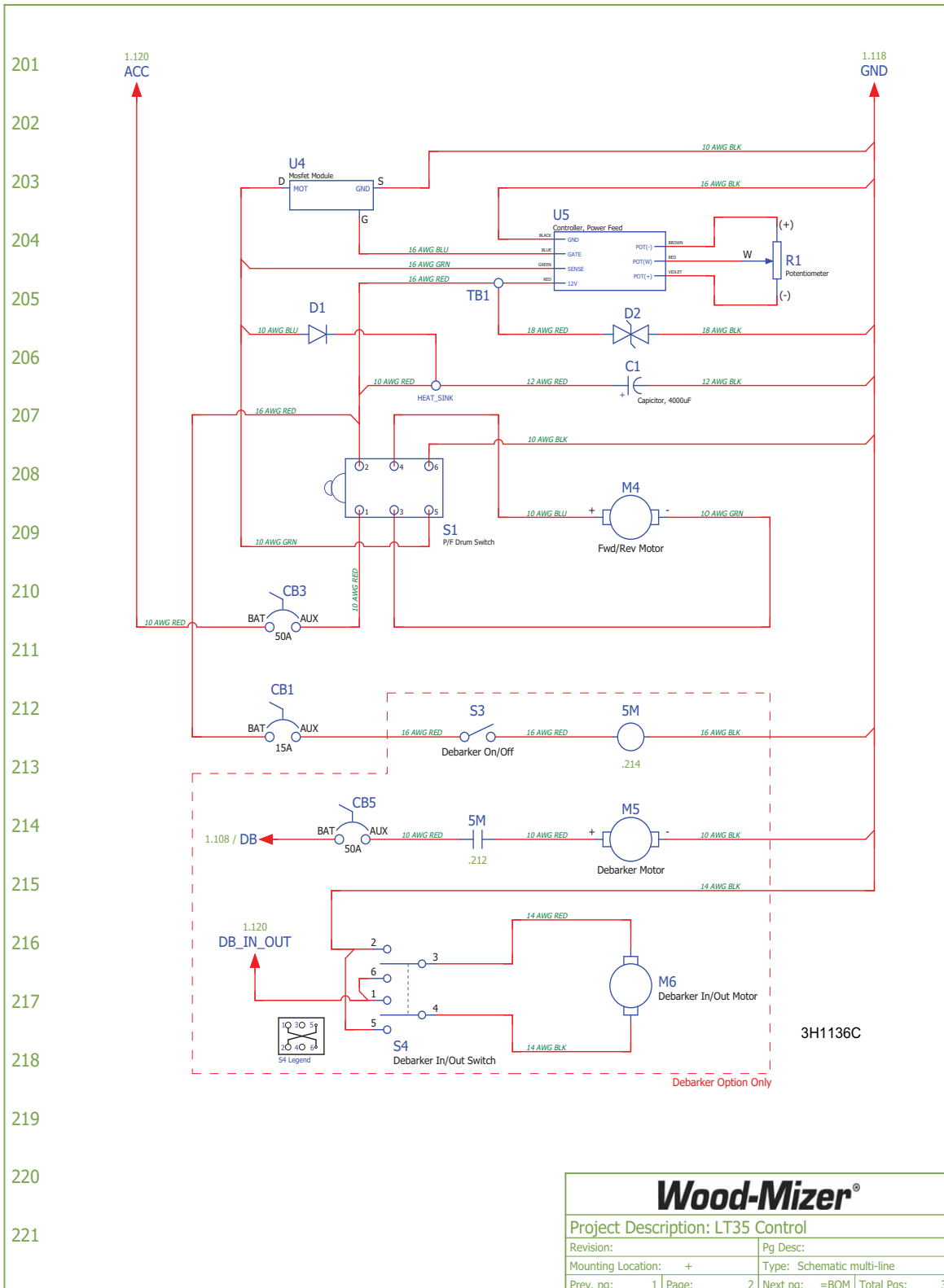


9.5 Component List, G25 & D17 (Rev. A6.00+)

Component List				
Item	Mfg. Part No.	Mfg.	Wood-Mizer Part No.	Description
5M, 7M	016371	Wood-Mizer	016371	Solenoid Kit, 200A 12V SPST Cont. Duty
ALT1	050287	Delphi	050287	Alternator, 105A
C1	052365	Wood-Mizer, LLC	052365	Capacitor Assembly, P/F Filter
CB1	75105	Various	053464	Breaker, 10A Manual Reset
CB2	75105	Various	053464	Breaker, 10A Manual Reset
CB3	1648-009-050-006	Mechanical products	024256	Circuit Breaker, 50A
CB4	1648-009-050-006	Mechanical products	024256	Circuit Breaker, 50A
CB5	1648-009-050-006	Mechanical products	024256	Circuit Breaker, 50A
D1	052363	Wood-Mizer, LLC	052363	Diode Assembly
D2	052294	Wood-Mizer, LLC	052294	Suppressor Assembly, 92+ Power Feed
F1	MEG225	Littelfuse	053339	MEGA Fuse 225A
F2	MEG150	Littelfuse	052370-150	MEGA Fuse 150A
F3	---	---	024150-5	Fuse, 5A ATO Blade Tan
G1	24M7 wet	East Penn Manufacturing (Deka)	P12315	Battery, 12V 24M7
H1	N430-0200-8111 & 801-416 015401	Sendec	015401	Meter, Hour
KS1	1218 W/BOOT	---	P04350	Switch, Key
L1	---	---	073555	Lamp Assembly, 180 Degree Amber Strobe
M1	4085-018	Iskra	038683	Motor, Hydraulic Pump
M3	4085-018	Current Applications	006747	0.50 HP DC Motor
M4	4085-018	Current Applications	006747	0.50 HP DC Motor
M5	4085-018	Current Applications	006747	0.50 HP DC Motor
R1	076050	Wood-Mizer, LLC	076050	Potentiometer, 1K
S2	2601AF2S12	Schneider Electric	E20440	Drum Switch, U/D
S5	024198	Wood-Mizer, LLC	024198	Switch, Hydraulic Micro
U1	053373	Wood-Mizer, LLC	053373	Bridge, SS Key
U2	053774	Key Electronics	053774	Controller, SimpleSet Key
U3	074021	Wood-Mizer, LLC	074021	Encoder Assembly, SimpleSet
U4	024387	Key Electronics	024387	Module, Mosfet
U5	024396	Key Electronics	024396	Controller, Power Feed

9.6 Wiring Diagrams, G25 & D17 (Rev. A4.00 - A5.00)







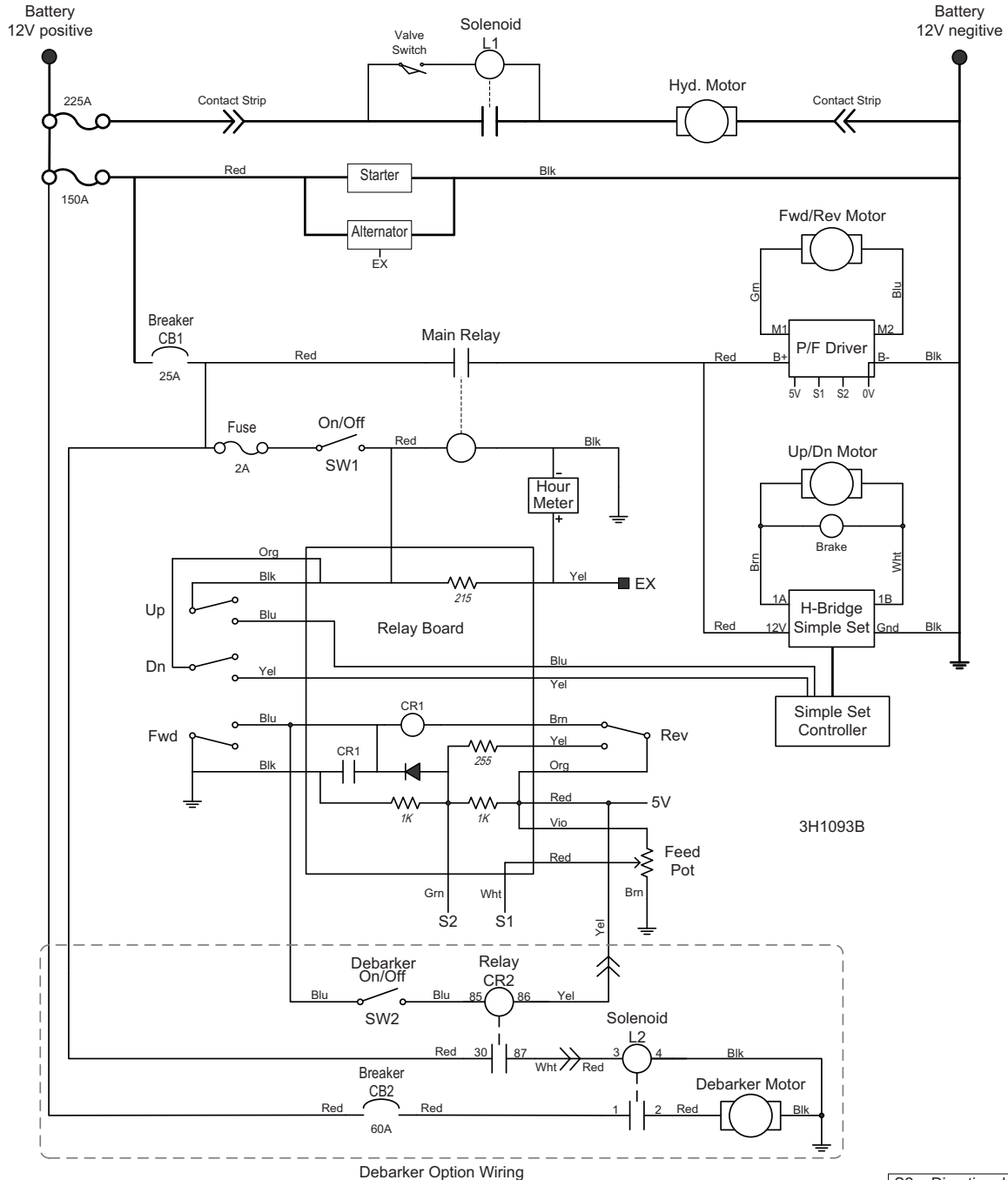
Electrical Information

Component List, G25 & D17 (Rev. A4.00 - A5.00)

9.7 Component List, G25 & D17 (Rev. A4.00 - A5.00)

Component List				
Item	Mfg. Part No.	Mfg.	Wood-Mizer Part No.	Description
5M, 7M	016371	Wood-Mizer	016371	Solenoid Kit, 200A 12V SPST Cont. Duty
ALT1	050287	Delphi	050287	Alternator, 105A
C1	052365	Wood-Mizer, LLC	052365	Capacitor Assembly, P/F Filter
CB1	75105	Various	053464	Breaker, 10A Manual Reset
CB2	75105	Various	053464	Breaker, 10A Manual Reset
CB3	1648-009-050-006	Mechanical products	024256	Circuit Breaker, 50A
CB4	1648-009-050-006	Mechanical products	024256	Circuit Breaker, 50A
CB5	1648-009-050-006	Mechanical products	024256	Circuit Breaker, 50A
D1	052363	Wood-Mizer, LLC	052363	Diode Assembly
D2	052294	Wood-Mizer, LLC	052294	Suppressor Assembly, 92+ Power Feed
F1	MEG225	Littelfuse	053339	MEGA Fuse 225A
F2	MEG150	Littelfuse	052370-150	MEGA Fuse 150A
G1	24M7 wet	East Penn Manufacturing (Deka)	P12315	Battery, 12V 24M7
H1	N430-0200-8111 & 801-416 015401	Sendec	015401	Meter, Hour
KS1	1218 W/BOOT	---	P04350	Switch, Key
M1	4085-018	Iskra	038683	Motor, Hydraulic Pump
M3	4085-018	Current Applications	006747	0.50 HP DC Motor
M4	4085-018	Current Applications	006747	0.50 HP DC Motor
M5	4085-018	Current Applications	006747	0.50 HP DC Motor
R1	076050	Wood-Mizer, LLC	076050	Potentiometer, 1K
S2	2601AF2S12	Schneider Electric	E20440	Drum Switch, U/D
S5	024198	Wood-Mizer, LLC	024198	Switch, Hydraulic Micro
U1	053373	Wood-Mizer, LLC	053373	Bridge, SS Key
U2	053774	Key Electronics	053774	Controller, SimpleSet Key
U3	074021	Wood-Mizer, LLC	074021	Encoder Assembly, SimpleSet
U4	024387	Key Electronics	024387	Module, Mosfet
U5	024396	Key Electronics	024396	Controller, Power Feed

9.8 Wiring Diagram, G25 (Rev. A1.00 - A3.00)

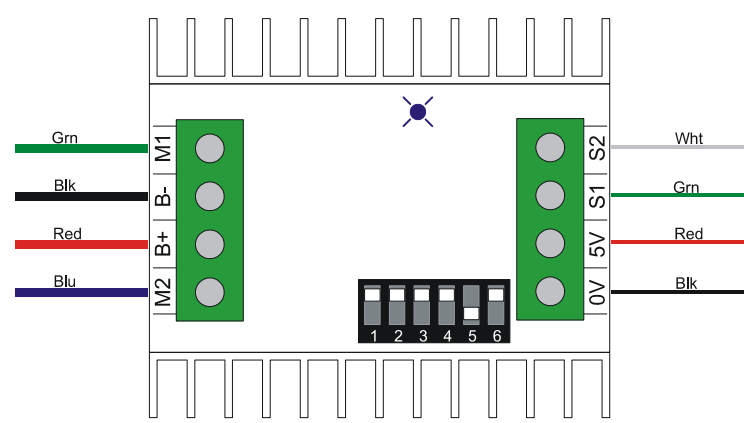
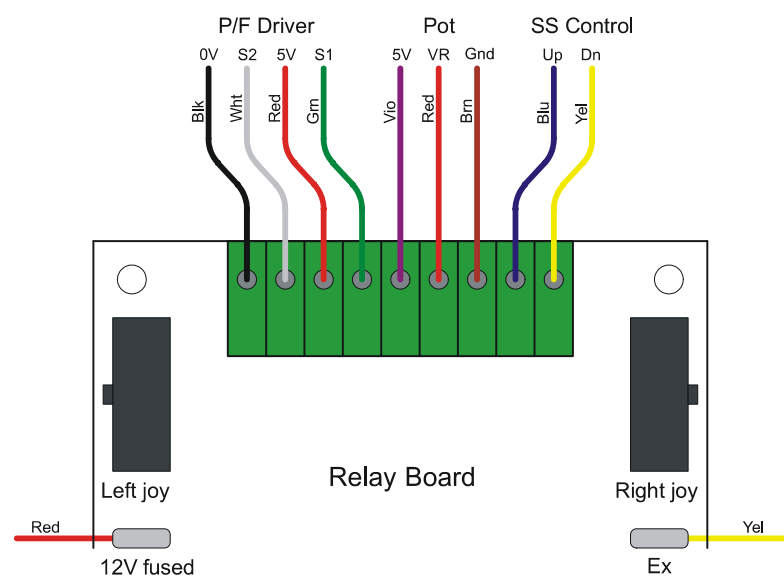


S2 – Directional control
4.2V = Rev
2.5V = Neut
0.5V = Fwd

S1 – Speed control
0 – 5V variable

9 **Electrical Information**
Wiring Diagram, G25 (Rev. A1.00 - A3.00)

G25



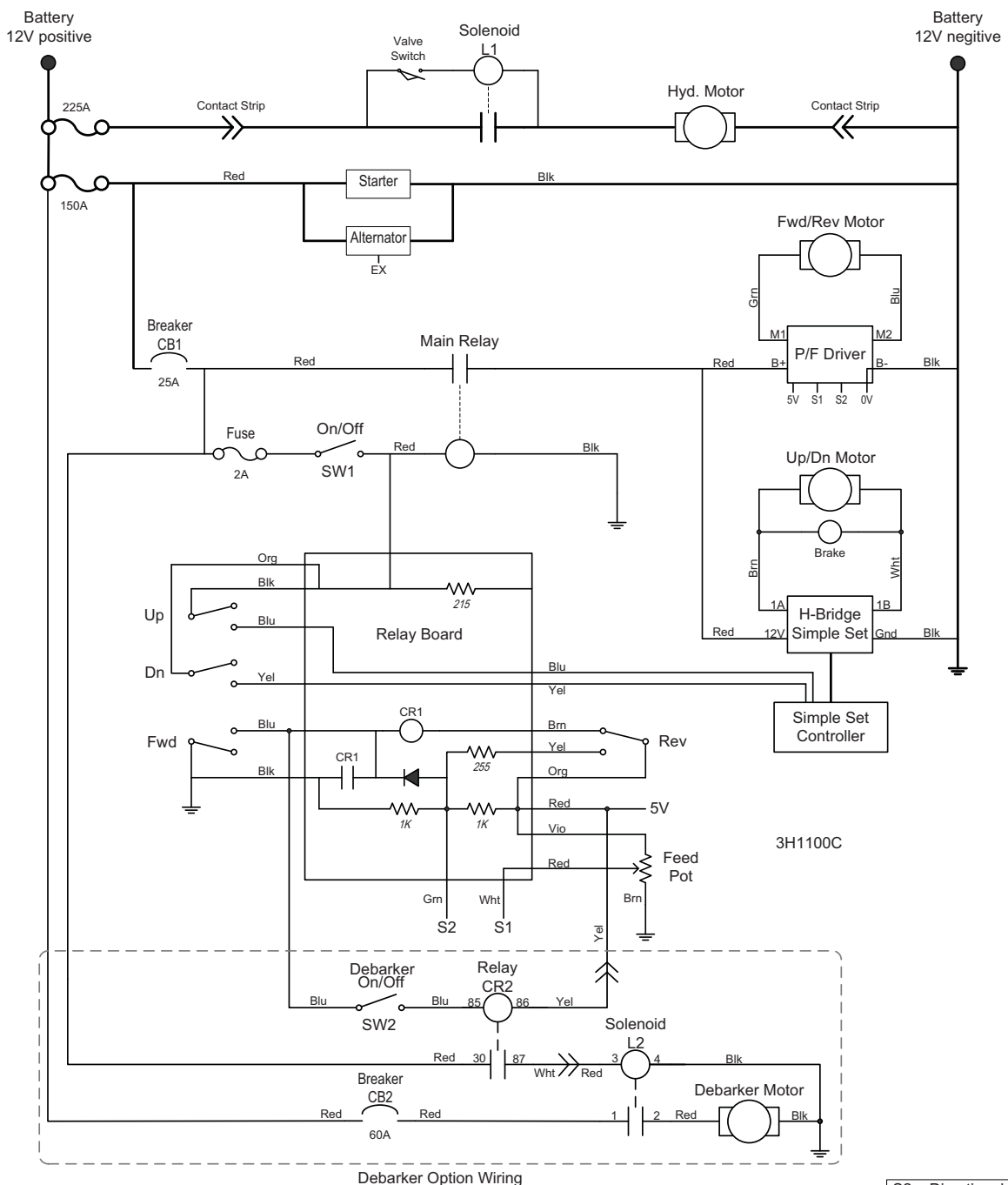
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Power Feed Motor Driver

9.9 Component List, G25 (Rev. A1.00 - A3.00)

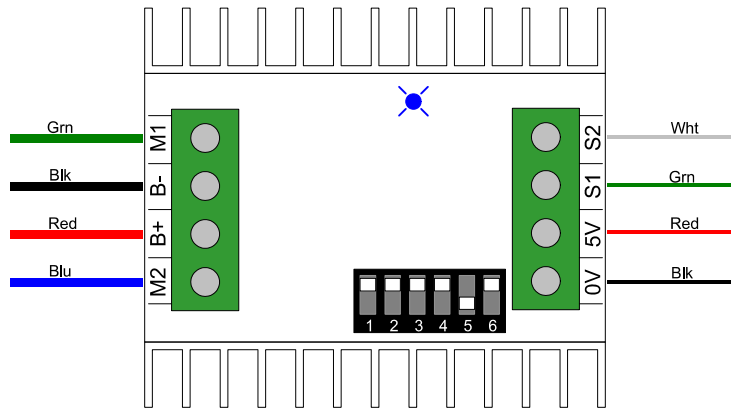
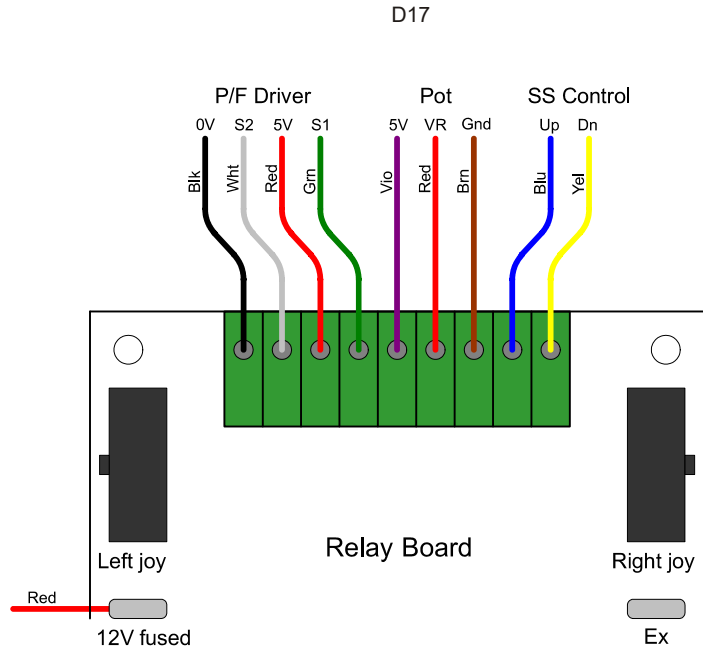
Component List				
Item	Mfg. Part No.	Mfg.	Wood-Mizer Part No.	Description
Battery	---	---	P12315	Battery, 12V 24M-7 (8800mf)
Breaker	46326B	Waytek, Inc.	053781	Breaker, 25A 12V Auto Reset
H-Bridge	053373	Key Electronics	053373	H-Bridge Assembly, SimpleSet
Hour Meter	015401	Wood-Mizer	015401	Meter, Hour Digital LCD w/Gasket
Feed Pot	A07793	Wood-Mizer	A07793	Pot Assembly, Feed Rate Control Pre-92
Fuse	053776	Wood-Mizer	053776	Fuseholder Assembly, LT35 2A
Main Relay	050436	Wood-Mizer	050436	Relay, 40A 12VDC Automotive
P/F Driver	057829	Wood-Mizer	057829	Driver Assembly, LT35 PF
P/F Motor	069361	Wood-Mizer	069361	Motor Assembly, LT28 Power Feed
Relay Board	053772	Wood-Mizer	053772	PCB Assembly, LT35 Relay
Up/Dn Motor	062510	Wood-Mizer	062510	Motor, Gear 250:1 w/Brake
CB2	184-060F-03-1	Marsh Electronics	053440	Breaker, 60A Hi-Amp Panel Mount
CR2	30M9197	Newark InOne	069638	Relay, ISO 60A 6VDC SPDT
Debarker Motor	4085-024C	Current Applications	053683	Motor, 12 V DC 3/4HP Electric
HN20	PS-521	Mallory	021137	Horn, Debarker ON Warning
L1	016371	Wood-Mizer	016371	Solenoid Kit, 200A 12V SPST Cont. Duty
L2	586-902	White Rodgers	015470	Solenoid, 200A 12V SPST Cont. Duty
SW2	4X846	Carling Switch	P03027	Switch, Toggle

9.10 Wiring Diagram, D17 (Rev. A1.00 - A3.00)



S2 – Directional control
4.2V = Rev
2.5V = Neut
0.5V = Fwd

S1 – Speed control
0 – 5V variable



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Electrical Information

Component List, D17 (Rev. A1.00 - A3.00)

9.11 Component List, D17 (Rev. A1.00 - A3.00)

Component List				
Item	Mfg. Part No.	Mfg.	Wood-Mizer Part No.	Description
Battery	---	---	P12315	Battery, 12v 24m-7 (8800mf)
Breaker	46326B	Waytek, Inc.	053781	Breaker, 25A 12V Auto Reset
H-Bridge	053373	Key Electronics	053373	H-Bridge Assembly, SimpleSet
Feed Pot	A07793	Wood-Mizer	A07793	Pot Assembly, Feed Rate Control Pre-92
Fuse	053776	Wood-Mizer	053776	Fuseholder Assembly, LT35 2A
Main Relay	050436	Wood-Mizer	050436	Relay, 40A 12VDC Automotive
P/F Driver	057829	Wood-Mizer	057829	Driver Assembly, LT35 PF
P/F Motor	069361	Wood-Mizer	069361	Motor Assembly, LT28 Power Feed
Relay Board	053772	Wood-Mizer	053772	PCB Assembly, LT35 Relay
Up/Dn Motor	062510	Wood-Mizer	062510	Motor, Gear 250:1 w/Brake
CB2	184-060F-03-1	Marsh Electronics	053440	Breaker, 60A Hi-Amp Panel Mount
CR2	30M9197	Newark InOne	069638	Relay, ISO 60A 6VDC SPDT
Debarker Motor	4085-024C	Current Applications	053683	Motor, 12 V DC 3/4HP Electric
HN20	PS-521	Mallory	021137	Horn, Debarker ON Warning
L1	016371	Wood-Mizer	016371	Solenoid Kit, 200A 12V SPST Cont. Duty
L2	586-902	White Rodgers	015470	Solenoid, 200A 12V SPST Cont. Duty
SW2	4X846	Carling Switch	P03027	Switch, Toggle

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