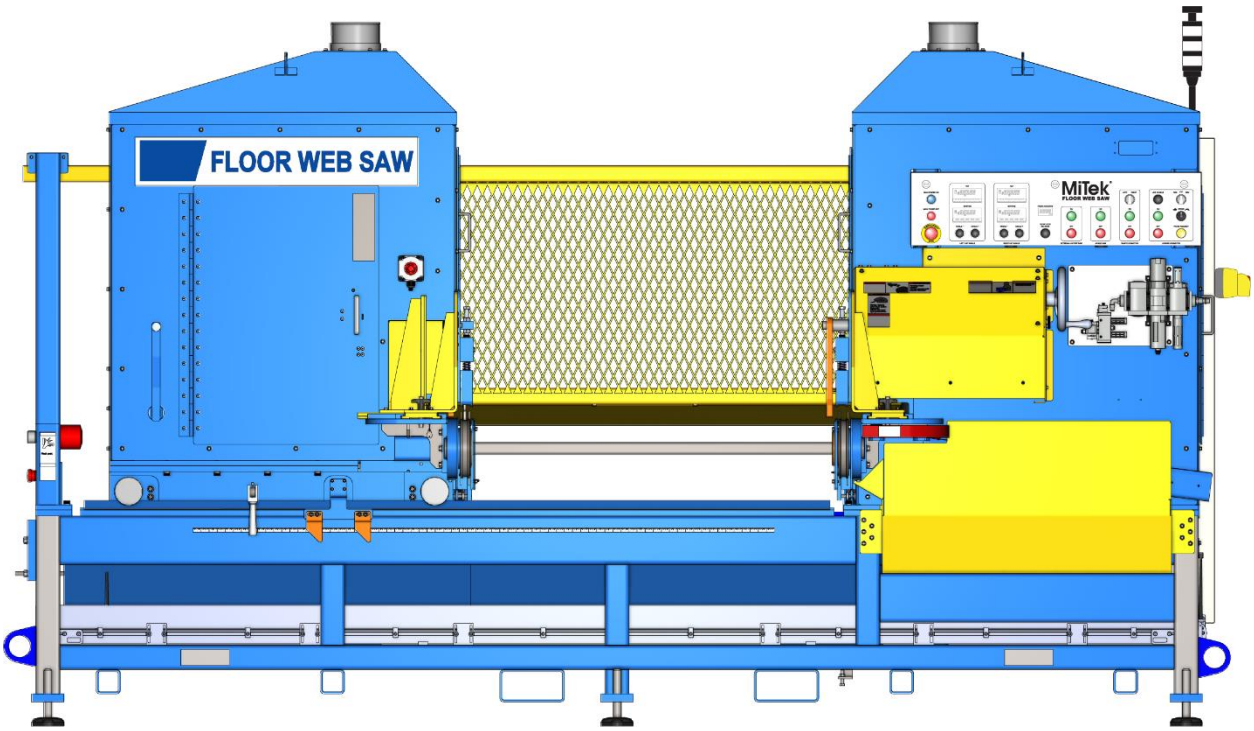
AUTOMATION

MiTek®

OPERATION AND MAINTENANCE MANUAL



Floor Web Saw Equipment

4 OCT 2024

Floor Web Saw Equipment

MiTek Automation
301 Fountain Lakes Industrial Drive
St. Charles, MO 63301
Phone: 800-523-3380
Fax: 636-328-9218
www.mitek-us.com

Manual applies to United States equipment.

Legal Notice

Return Goods Policy

Return goods cannot be accepted without prior authorization and are subject to a restocking charge. The Seller certifies the articles specified herein were produced in compliance with all provisions of the Fair Labor Standards Act of 1938, as amended, including Section 12.—Rev. 6/98.

Corrections and Improvements

To report errors or recommend improvements to this manual, please send an email to autodoc@mii.com. Use this page to record service bulletins and notices that you receive to keep your manual updated.

Safety

Safety Indicator Signal Words

The following signal words and colors are used throughout this document to indicate safety hazards. Pay careful attention when you see them. The level of severity differs for each signal word and color.

Signal words are accompanied by graphics showing what personnel should or should not do. The graphics are called safety symbols and are defined starting on page 9, but more specific text is provided every time a graphic is used throughout the manual.

Failure to comply with the instructions accompanying each signal word may result in property damage, personal injury, or even death. Personnel must follow all safety procedures and practices to ensure the safest possible operation of this equipment.

However, **at no time is this document a substitute for common sense**. Personnel must ensure that the work environment is safe and free of distractions.

Danger	Danger Indicates an imminently hazardous situation which, if not avoided, is likely to result in death or serious injury.
Warning	Warning Indicates a potentially hazardous situation, which, if not avoided, may result in death or serious injury.
Caution	Caution Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.
Notice	Notice Calls attention to information that is significant to understanding the operation at hand or the potential for property damage.
Environmental	Environmental Applies to conditions that may affect the environment but do not have an immediate, direct effect on personnel or equipment.

Safety Symbol Definitions

The safety symbols shown in this section, are found throughout the manual to indicate hazards related to this machine. All personnel expected to operate or maintain this machine should be familiar with these safety symbols and their meanings.

User caution. It indicates a condition where equipment damage resulting in injury could occur if operational procedures are not followed. To reduce risk of damage or injury, refer to accompanying documents, and follow all steps or procedures as instructed.

Electrical hazard. It indicates dangerous high voltages inside of an enclosure and/or the presence of a power source. To reduce the risk of fire or electric shock, do not attempt to open the enclosure or gain access to areas where you are not instructed to do so. Refer servicing to qualified service personnel only.

This equipment should be operated only from the type of source indicated on the manufacturer's identification label. Installation should be in compliance with applicable sections of the national electric code. Consult your local building code before installing.

Crush hazard. Keep hands and other body parts clear.

Noise hazard. Equipment produces loud noise in excess of 100 DBA during operation. Use appropriate PPE to protect hearing when in the vicinity of this equipment.

Slip hazard. Use of appropriate footwear is required.

Trip hazard. Pay attention when walking in this area.

Kickback hazard.

Keep hands clear of cutting parts.

Keep hands and body clear.

Crush hazard from above.

Ventilate. Slots and openings in the cabinet are provided for ventilation to ensure reliable operating of the equipment. To protect the equipment from overheating, those openings must not be blocked or covered. This equipment should not be placed in a built- in installation, such as a wall cutout, unless proper ventilation is provided because hot temperatures result.

Operation of this equipment may result in flying debris and excessive noise. To reduce the risk of eye injury, wear only approved PPE.

Keep feet away from moving parts.

Keep hands away from moving parts.

High pressure hose. Use appropriate PPE when working on equipment. Maintain a safe pressure level at all times.

The equipment has automatic restarting capability. Lockout/tagout on the upstream disconnect before servicing.

Warning. Three-man lift is required to move this equipment safely. Refer to the installation manual.

The operation of this equipment requires the use of PPE. Do not operate without wearing the required protective clothing.

Refer to manual. After installation, read the user's guide carefully before operating. Follow all operating and other instructions carefully.

Circuits are live. Lockout/tagout on the upstream disconnect prior to servicing.

Lockout in a de-energized state.

Lift point. In order to decrease the likelihood of damage to the equipment, use only the lift points indicated in the manual.

To reduce the risk of equipment damage or injury to personnel, maintain pressure at safe levels.

Use of lift equipment is mandatory.

Consult material safety data sheet.

Unplug equipment before servicing.

No smoking in this area.

Hazardous moving parts are located behind this access panel. Do not operate this equipment without all guards and covers in place.

Do not place containers with liquids such as coffee, water, soda, etc. on this equipment. Do not operate this equipment in a wet environment. Do not expose to water.

No lift points. Do not lift this device with a hook/crane assembly. Equipment damage occurs. Refer to the installation instructions.

Do not use unapproved lubricants in this equipment.

Do not operate without guards in place.

Do not discard into the municipal waste stream.

Indicates notes regarding lubrication.

General Safety & Equipment Rules

Because it is impossible to anticipate every circumstance that might involve a hazard, the safety information provided in this equipment manual and on the machine is not all-inclusive. If this machine is operated or serviced using a procedure not specifically recommended by the manufacturer, the procedure shall be approved by a professional engineer to ensure it will not render the equipment unsafe.

USE EXTREME CAUTION AND COMMON SENSE AT ALL TIMES!

Know Your Equipment

- Read this manual completely before using or maintaining the equipment. Do not operate this machine unless you have a thorough knowledge of the controls, safety devices, emergency stops, and operating procedures outlined in this manual.
- Read and follow all safety notes. Failure to comply with these instructions may result in economic loss, property damage, and/or personal injury, including death.
- Refer to the lockout/tagout guidelines on the following page s 19-22 to safely perform maintenance and troubleshooting of this equipment.
- Observe and obey all safety labels. Replace worn labels immediately.
- Use this equipment solely for the purpose described in this manual.
- Only qualified personnel should attempt to operate or perform maintenance on this equipment.

“Qualified personnel” is defined as:

...a person or persons who, by possession of a recognized degree or certificate of professional training, or who, by extensive knowledge, training, or experience, has successfully demonstrated the ability to solve problems relating to the subject matter and work—ANSI B30.2-1983.

...one who has skills and knowledge related to the construction and operation of the electrical equipment and installations and has received safety training on the hazards involved—NEC 2002 Handbook

Personal Safety

- Always wear personal protective equipment (for example, safety glasses and hearing protection) in an industrial environment.
- Utilize a filtering facepiece (dust mask) when working near sawdust.
- Wear proper clothing. Do not wear loose clothing or jewelry. Confine long hair by tying it back.
- Use caution when lifting heavy parts or material.

Keeping a Safe Environment

- Pay attention to your surroundings.
- Keep children away. All visitors should be kept at a safe distance from the work area. Hazards may not be apparent to individuals unfamiliar with the machine.
- Keep work areas well-lit.
- Keep the work area clean and free of any trip or slip hazards.
- Do not use the equipment in damp or wet locations or expose it to rain or snow.
- Minimize dust clouds and protect your equipment by cleaning dust in this manner:
  A. Shut down electrical power and sources of ignition.
  B. Vacuum dust before blowing with air.
  C. Powered cleaning equipment such as vacuums must be consistent with local governmental codes for use in dusty conditions.

Electrical Safety Notes

- Do not use any liquids in the interior of electrical cabinets.
- When using solvents on and around the machine, remove power to the machine to eliminate the chance of sparking, resulting in an explosion or fire. Wear a respirator approved for use with solvents.

Installing the Equipment

- Follow installation instructions completely.
- Use proper lifting equipment rated for the proper weight.
- This equipment is not for use in a residential area.

Refer to **Emergency Stop Buttons/Mechanisms section** for location of E-stops.

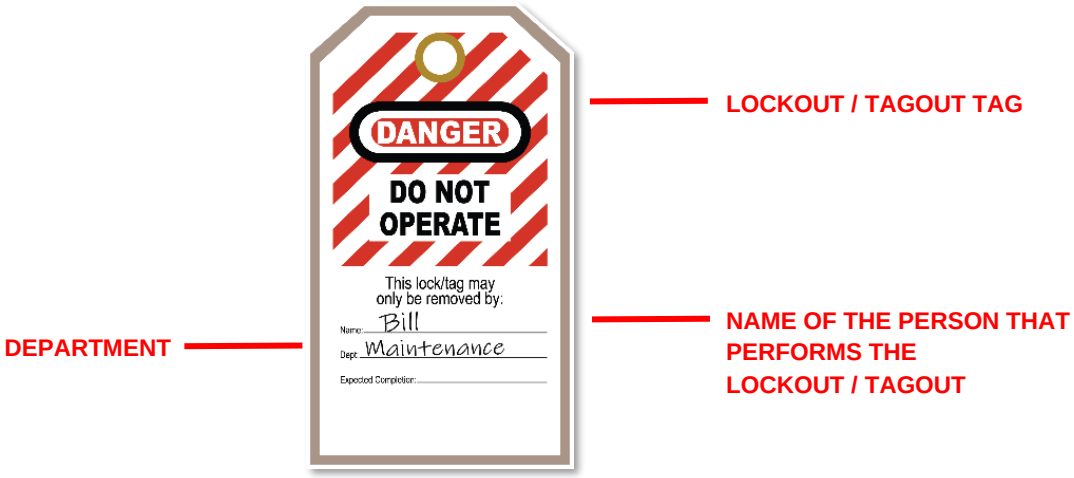
	⚠ WARNING
	**HIGH VOLTAGE ELECTRICITY!** **May cause serious personal injury or death. Ensure only qualified electricians perform electrical service work.**

	⚠ WARNING
	**Read the equipment manual, safety labels, and all safety information provided before operating or maintaining this equipment.**

	⚠ WARNING
	**CRUSH OR CUT HAZARD** **Guards must always be in place during operation to avoid serious injury and possibly death.** **Always replace guards after completing maintenance and before removing the lockout/tagout device.**

	⚠ WARNING
	**Many components are manufactured from high carbon, heat-treated steel. Do not attempt to straighten, bend, or weld these components, as they may fail under load causing serious personal injury or death.**

Lockout/Tagout Guidelines



All lockout/tagout guidelines must be met according to OSHA 29 CFR 1910.147.

Lockout/tagout all energized systems before performing maintenance on them. A specific procedure should be included in your company's energy control program. This manual is not intended to replace your company's deenergizing or **lockout/tagout procedure** required by OSHA, but merely to provide general guidance.

The term **"lockout,"** as used in this manual, means placing a **lockout device**, such as a keyed padlock, on any and all energy sources to ensure that the energy-isolating device and the equipment being controlled cannot be re-energized or operated until the **lockout device** is removed.

- Energy sources include electrical, mechanical, hydraulic, pneumatic, chemical, thermal, or other energy.
- In the case of electrical energy sources, the main power and control power to the machinery must be turned off and physically locked in the off position.
- Before performing maintenance on the pneumatic or hydraulic systems, bleed the lines prior to **lockout/tagout** to eliminate pressure.

If more than one person is working in a restricted zone, use a **group lockout device** that will allow each person to use a lock that can be removed only by the person performing the maintenance.

"Tagout" means that a prominent warning is securely fastened to an energy-isolating device to indicate that the equipment shall not be operated whenever you see this symbol in the margin: **lockout/tagout!**

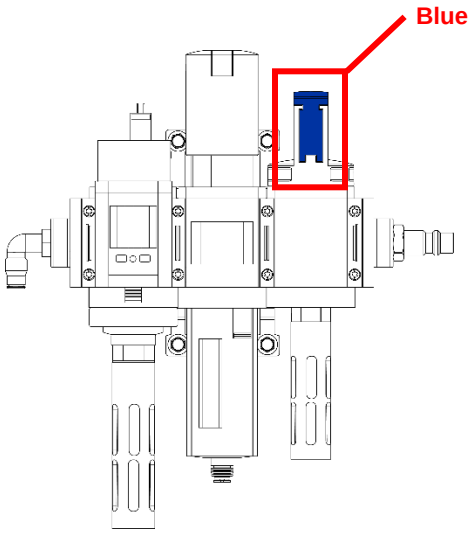
Hydraulic or Pneumatic System Lockout/Tagout Procedure

When Lockout/Tagout Is Not Required

If working on components other than the hydraulic or pneumatic system that require you to be near movable hydraulic or pneumatic components, you must, at a minimum, physically restrain those components from moving. If this is not possible, lockout/tagout the entire hydraulic or pneumatic system.

When Lockout/Tagout Is Required

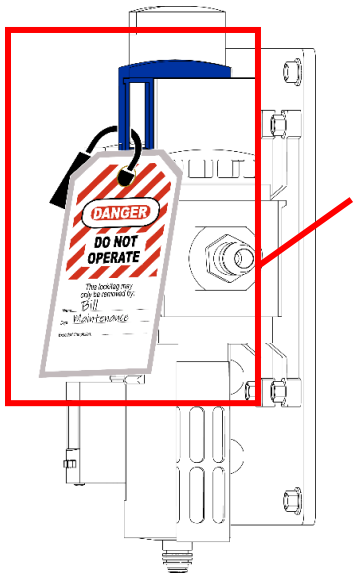
Before attempting repair or performing maintenance on a hydraulic or pneumatic line or component, lockout/tagout the machine properly and follow your company's approved lockout/tagout procedures.

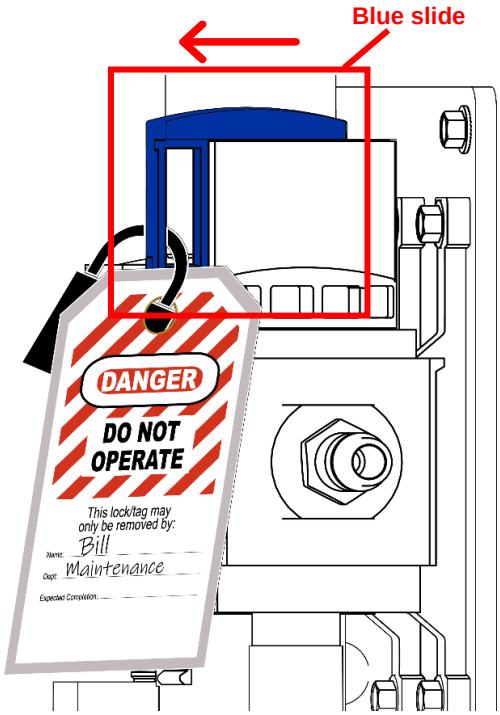


1. First, **turn the pressure sensor clockwise** to the off position. The air pressure will automatically be released from the air lines.

2. On **the pressure sensor** push the blue slide outward so the **LOCKOUT/TAGOUT** hole is visible.

3. **Secure a LOCKOUT/TAGOUT** tag through the hole on the slide.





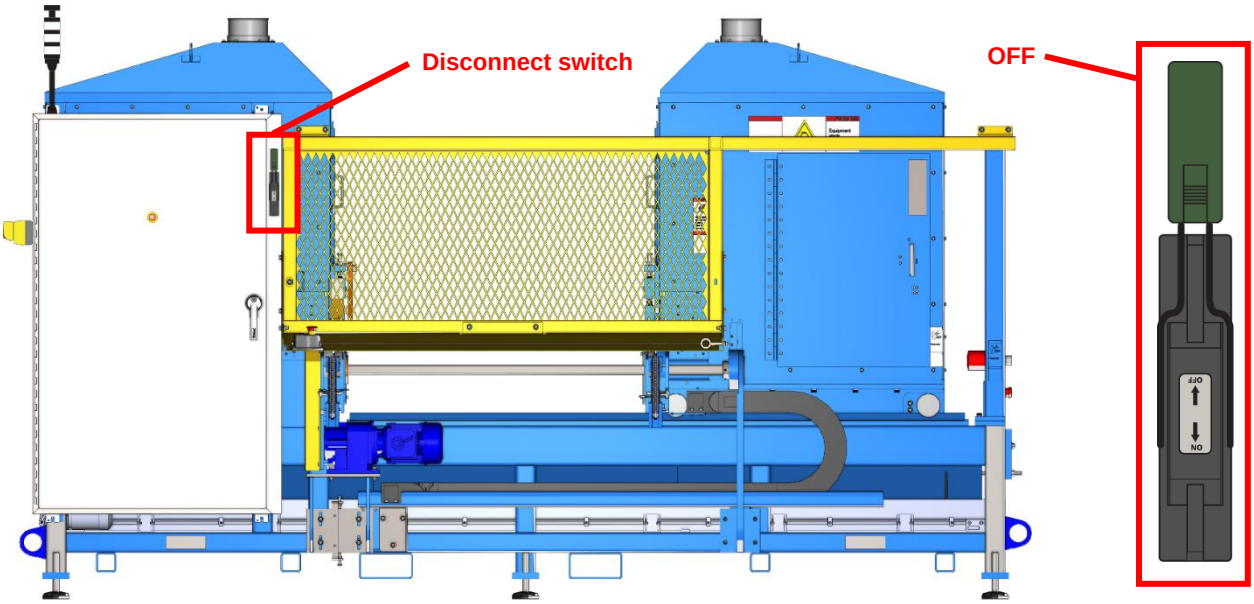
Electrical Lockout/Tagout Procedures

Working on a Machine Outside the Machine's Main Electrical Enclosure

Before performing maintenance on any machine with electrical power, lockout/ tagout the machine properly.

When working on a machine outside of the machine's main electrical enclosure, not including work on the electrical transmission line to the machine, follow your company's approved lockout/tagout procedures which should include, but are not limited to the steps here.

1. Engage an E-stop on the machine.
2. Turn the disconnect switch handle to the Off position.
3. Attach a lock and tag that meets OSHA requirements for **lockout/tagout**.
4. Restrain or de-energize all pneumatic components, hydraulic components, and other parts that could have live or stored power.



	**⚠ WARNING** **ELECTROCUTION HAZARD.** **When the disconnect switch is off, there is still live power within the disconnect switch's enclosure. Always turn off the power at the building's power source to the equipment before opening this electrical enclosure.**

Working on a Machine Inside the Machine's Main Electrical Enclosure or in the Electrical Transmission Line to the Machine

Before opening the main electrical enclosure or attempting to repair or replace an electrical transmission line to the machine, lockout/tagout the machine properly and follow your company's approved lockout/tagout procedures, which should include but are not limited to the steps here.

1. Engage an E-stop on the machine.
2. Shut the power to the machine off at the machine's power source which is usually an electrical service entry panel on the facility wall.
3. Attach a lock and tag that meets OSHA requirements for lockout/tagout.
4. Open the door to the enclosure in which you need access, and using a multimeter, verify that the power is off.

Troubleshooting with an Energized Machine

Only a qualified electrician, using the personal protective equipment and following the procedures recommended in **NFPA 70E** should ever attempt service or repair of or near an energized area or component of the machine.

Whenever maintenance is performed while the equipment is electrically energized, there is a potential electric arc flash hazard. Refer to **NFPA 70E** for the personal protective equipment required when working with electrically energized components.

Pneumatic and hydraulic components may move unexpectedly if not de-energized. Physically restrain any components capable of movement when working on or near those components.

Safety Tests

These test procedures MUST be performed by qualified personnel at startup and after ANY maintenance, adjustment, or modification. Testing ensures that the safety system and machine control system work together to properly stop the machine.

General Inspection

1. Lockout/tagout the machine.
2. Make sure sharp objects are clear of all pneumatic and electrical system cables.
3. Check the Floor Web Saw for debris or tools that would block the path of parts.
4. Remove any that you may find. The following locations are especially important:
   - Infeed Rails
   - Dogtooth chain
   - Outfeed component
   - Waste conveyor
   - Cutoff saw waste roller conveyor
5. Check saw blade condition (see When to Replace the Saw Blade on page 72).
6. Remove lockout/tagout and return electrical power and pneumatic pressure to the machine.
7. Power up the saw using the instructions on Powering Up or Down on page 43.
8. Press the illuminated blue Reset button. The Reset button light should turn off to indicate the machine is ready for normal operation.
9. The main filter / regulator and other sub-regulators should match the pressure ratings detailed in Overview of Pneumatic Components on page 80.
10. Without pressing the open-door pushbutton, pull on the door handle for each door (6 total) to verify all doors are closed and locked.

	⚠ **CAUTION** **CRUSH AND CUT HAZARD** **Always replace guards after completing maintenance and before removing the lockout/tagout device.** **Operating a machine with guards removed may result in serious injury or death.**

Inspecting Indicators

- While performing any of the following safety tests, check to ensure the beacon on top of the main electrical enclosure lights up when cutting is taking place.
- Verify that all safety labels are present and legible.

Interlock Door Test

This test is intended to verify the interlock doors **DO NOT OPEN** when the saw blade is in motion.

1. Start running the saw and all integrated components:
    a) Power up the saw using the instructions on Powering Up or Down on page 43.
    b) Start the saw motor by pressing the Saw Motor START button on the operator interface.
2. Attempt to open the six interlock doors by simultaneously pressing the open-door pushbutton and pulling on the door handle:
    - Carriage cabinet
    - Stationary cabinet
3. If any doors open, immediately lockout/tagout the machine and contact Automation Support.

	⚠ CAUTION
	CRUSH AND CUT HAZARD Always replace guards after completing maintenance and before removing the lockout/tagout device. Operating a machine with guards removed may result in serious injury or death.

E-Stop Test

1. Start running the saw and all integrated components:
    - Power up the saw using the instructions on Powering Up or Down on page 43.
    - Start the saw motor by pressing the Saw Motor START button on the operator interface.
    - Wait approximately 5 seconds until the blade is up to full speed.
2. Prepare a stopwatch to time how long it takes for the saw blade to stop.
3. Activate any one of the E-stops listed here and measure the time between pressing the E-stop and when the blade comes to a complete stop.
    - Operator interface E-stop
    - Electrical enclosure E-stop
    - Infeed Rail E-stop
    - Other Infeed or Outfeed Component E-stops (will vary depending on setup)
4. Ensure that the blade and integrated components stop motion in a timely manner:
    - If the external cutoff saw blade does not stop within 5 seconds, contact Automation Support immediately for resolution.
    - If the cabinet saw blade does not stop within 7 – 8 minutes, contact Automation Support immediately for resolution.
    - If all integrated components do not stop in a timely manner, lockout/ tagout the entire wood processing system and arrange for a qualified service technician to troubleshoot and repair the equipment.
    - If the saw blade and integrated components stop as expected, repeat the procedure to test all E-stops listed in step 3.

	⚠ **CAUTION** **CRUSH AND CUT HAZARD** **Always replace guards after completing maintenance and before removing the lockout/tagout device.** **Operating a machine with guards removed may result in serious injury or death.**

Testing Movement While E-Stop is Active

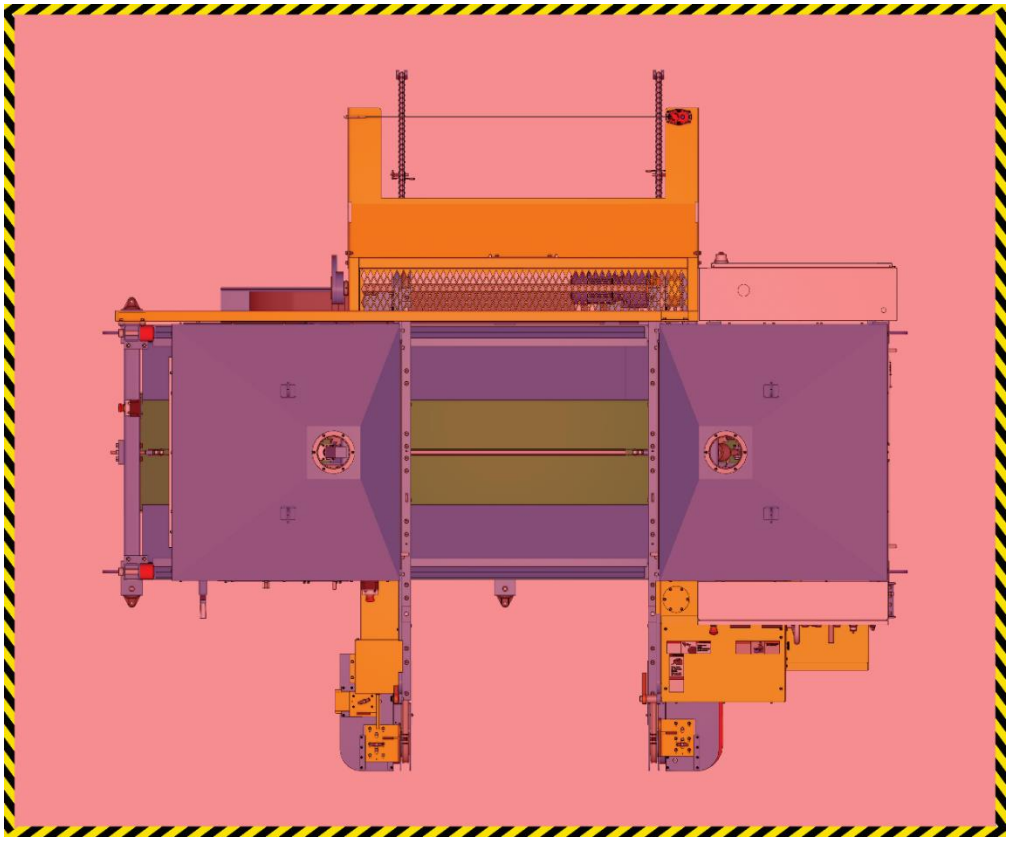
1. With an E-stop activated, attempt to manually move an axis.
2. Watch the axis that was chosen to see if it moves. Because an E-stop is activated, no movement should occur.
3. If movement does occur, Lockout/Tagout immediately and contact Automation Support.

	⚠ **CAUTION**
	**CRUSH AND CUT HAZARD** **Always replace guards after completing maintenance and before removing the lockout/tagout device.** **Operating a machine with guards removed may result in serious injury or death.**

Restricted Zone

The restricted zone must be marked and maintained so everyone near the equipment can clearly see the area where danger may exist. The customer is responsible for marking the restricted zone before startup, and maintaining the markings so it is clearly visible throughout the machine's life.

Your equipment arrived with Service Bulletin SB181, which includes restricted zone tape and instructions for installing it. You can order additional restricted zone kits using the contact information on Ordering Parts on page 30. Safety Tests Perform all tests listed in Safety Tests on page 23.



Introduction to the Manual

In order for this manual to be useful, the appropriate sections must be easily accessible by operators and maintenance personnel.

This manual addresses the most recent version of the equipment as of the date listed on the title page.

Understanding the Manual

Hyperlinks - All text references colored blue (in form of page numbers, headings, etc.) can be selected to immediately take you to the relevant section.

The Drawing Set - A list of drawings can be found in the back of this equipment manual or in a separate 11x17 binder.

Introduction to the Equipment

Purpose of the Equipment

The Floor Web Saw helps Floor Truss Component Manufacturers cut more high-mix chords and web parts by avoiding machine downtime and increasing throughput with more green-light time.

	⚠ **WARNING**
	**Read this manual completely before using this equipment.** **Do not operate this equipment until you have a thorough understanding of all controls, safety devices, emergency stops, and operating procedures outlined in this manual.** **All hazard instructions must be read and observed. Failure to do so may result in economic loss, property damage, and/or personal injury.** **This manual must always be available to personnel.**

Subject	Training and Related Links
Using the Manual	Show the operator how to access the manual on the MiTek website.
Safety	Review the lockout/tagout procedures for all machine systems: Lockout/Tagout on page 19. Walk the operator through all procedures in the Safety Tests section: Safety Tests on page 23. Instruct the operator to read the entire Safety chapter before operating the machine for the first time: Safety (English) on page 8.
Operation	Walk the operator through all procedures in the Safety Related Operating Procedures section and make note of the location of all E-stops: Safety-Related Operating Procedures on page 16. Walk the operator through the Operating Procedure section: Operating Procedure on page 44.
Maintenance	Walk the operator through the process of replacing a saw blade: Saw Blade on page 72. Instruct the operator to review the Maintenance chapter to learn more about the necessary maintenance to keep their machine running optimally: Maintenance on page 76. Walk through the Maintenance Checklist with the operator. Make note of the daily, weekly, and monthly/ annual task structure and demonstrate how selecting the page numbers will take you to the related section: Maintenance Checklist on page 76.

Description of the Equipment

The Floor Web Saw includes the following components:

• The Lumber Infeed takes the lumber, in the correct order, to the Dog Teeth of the Lumber Infeed for cutting.

• The Saw component contains four internal saw blades and one external cutoff saw.

• The Outfeed Arm receives cut parts where the cut parts need to be removed by hand.

Safety Compliance of the Equipment

Equipment shipped to a U.S. destination is compliant NFPA 79, NEC 2009, and applicable OSHA regulations.

Additional Resources

Website

Visit the **MiTek website "mitek-us.com"** for up-to-date information on all **MiTek equipment**. You may also find the following information there:

• The latest revisions of this manual

• Service bulletins pertaining to your equipment

• Support, safety, and training information

• Part numbers for ordering parts

Contact Us

MiTek Automation Support - 301 Fountain Lakes Industrial Drive, St. Charles, MO 63301

Parts Orders (with part number): Email - mitekparts@mii.com

Technical Assistance Phone: 800-523-3380

Fax: 636-328-9218

machinerysupport@mii.com

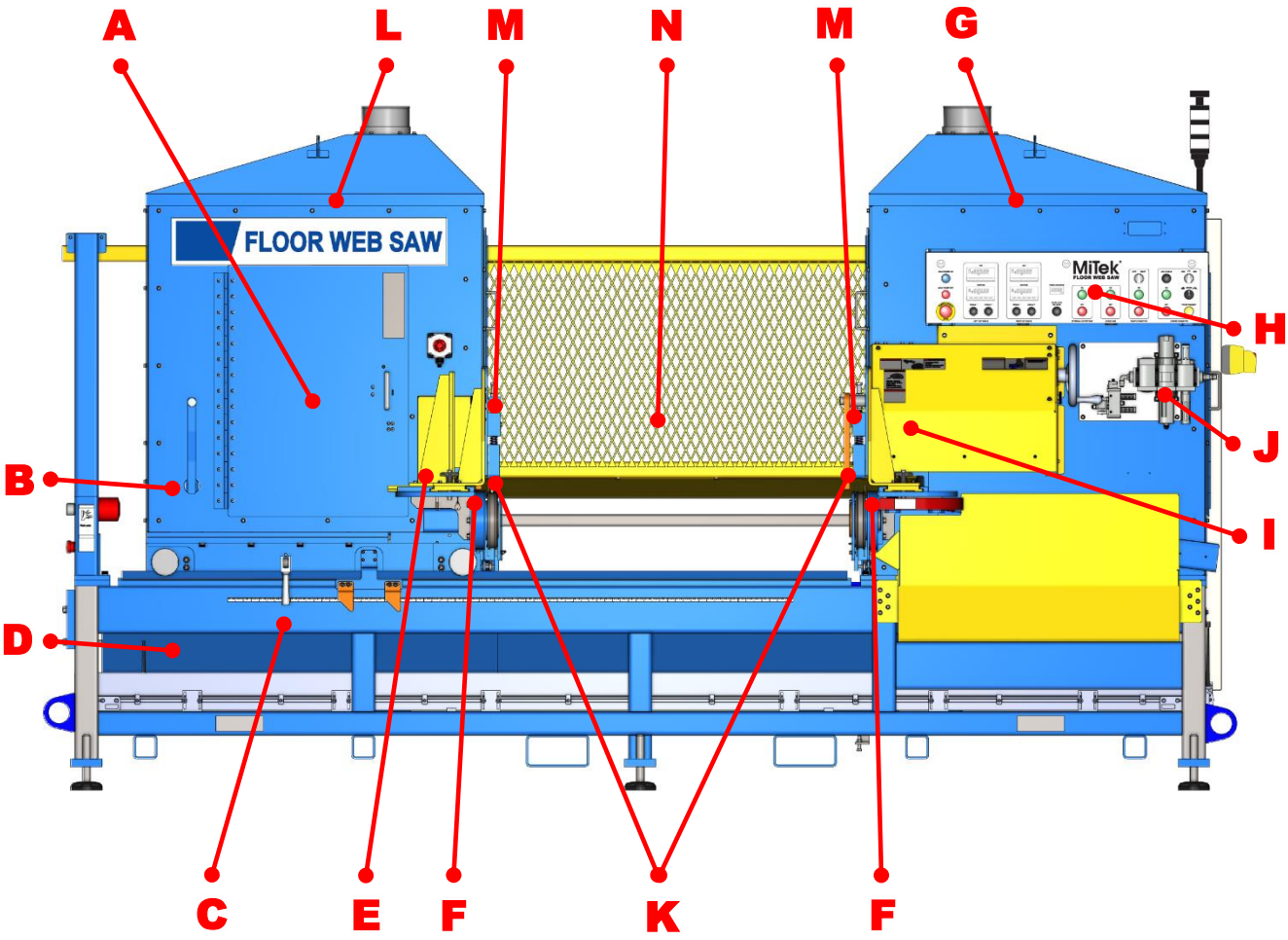
Videos

Search for "MiTek Inc" to find us on YouTube.

General Information

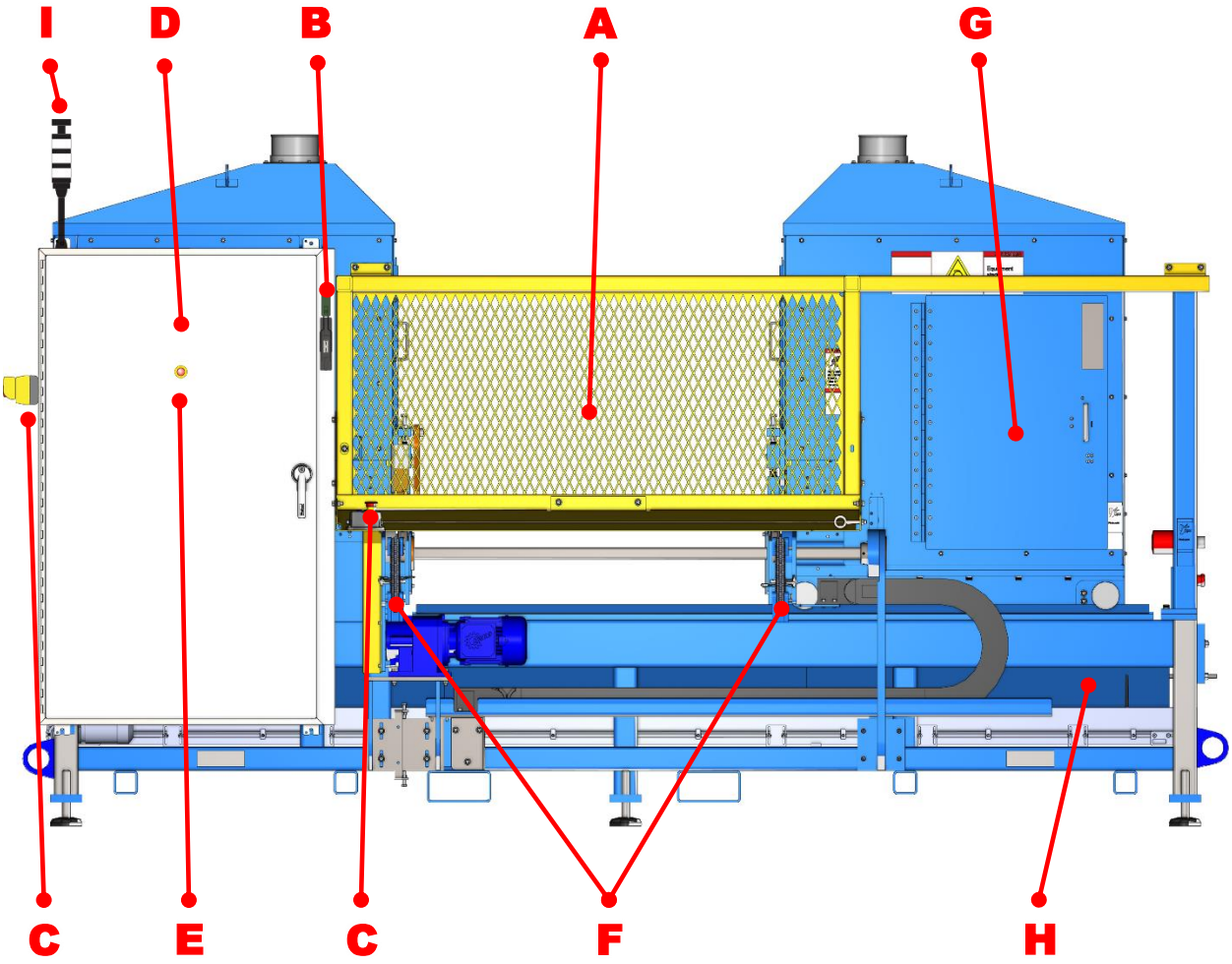
Floor Web Saw Overview

Front



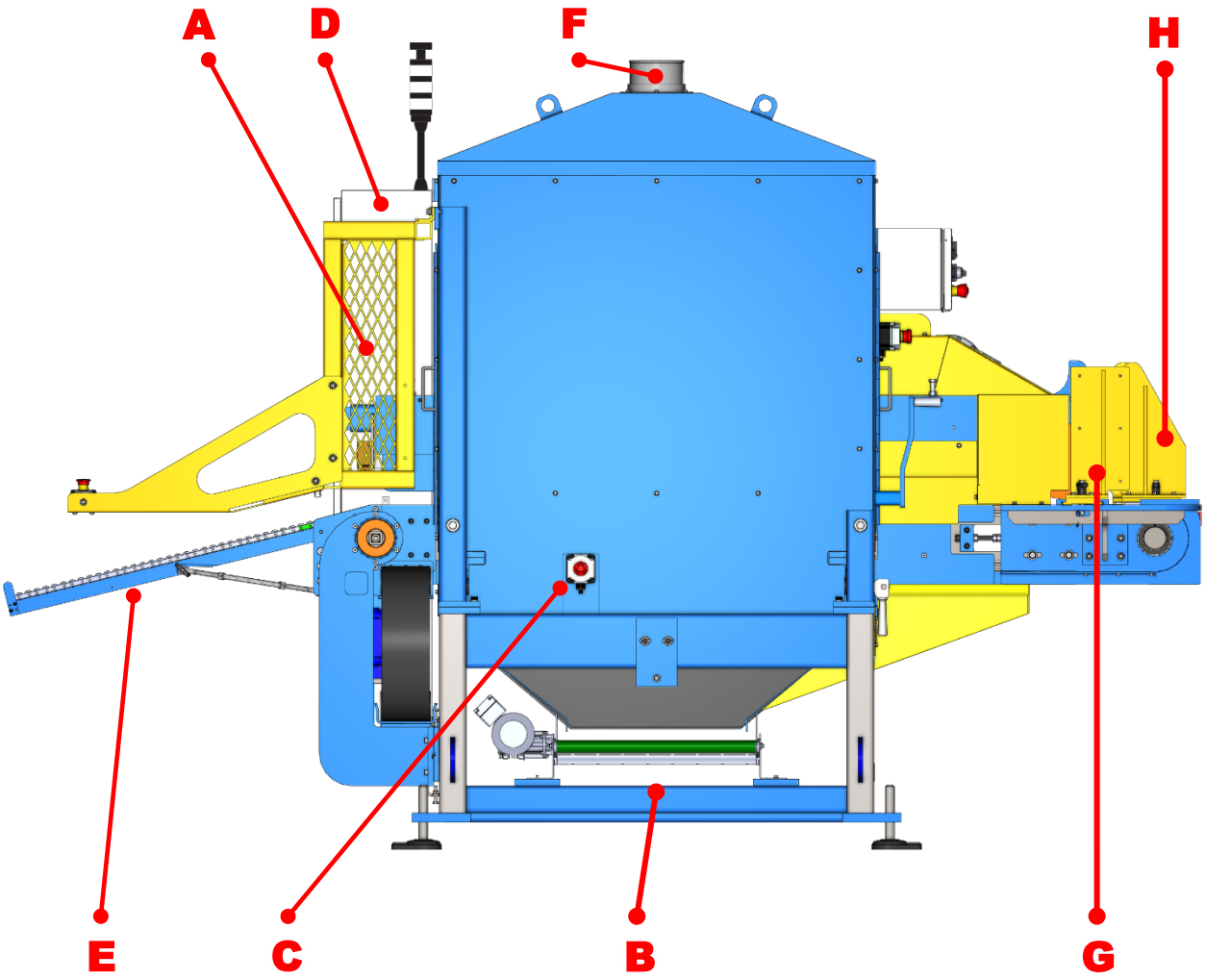
A – Access Door 1 of 6, B – Hand Crank to move the cabinet, C - Carriage Cabinet Lock, D - Waste Conveyor, E – Board Length End Stop, F – Magazine Width Stops, G – Stationary Cabinet End, H – Operator Control Panel, I – External Cut-Off Saw Housing, J – Air Supply Shut Off, K – Lumber Infeed Conveyor, L – Carriage Cabinet End, M – Lumber Guide, N – Rear Guard.

Back



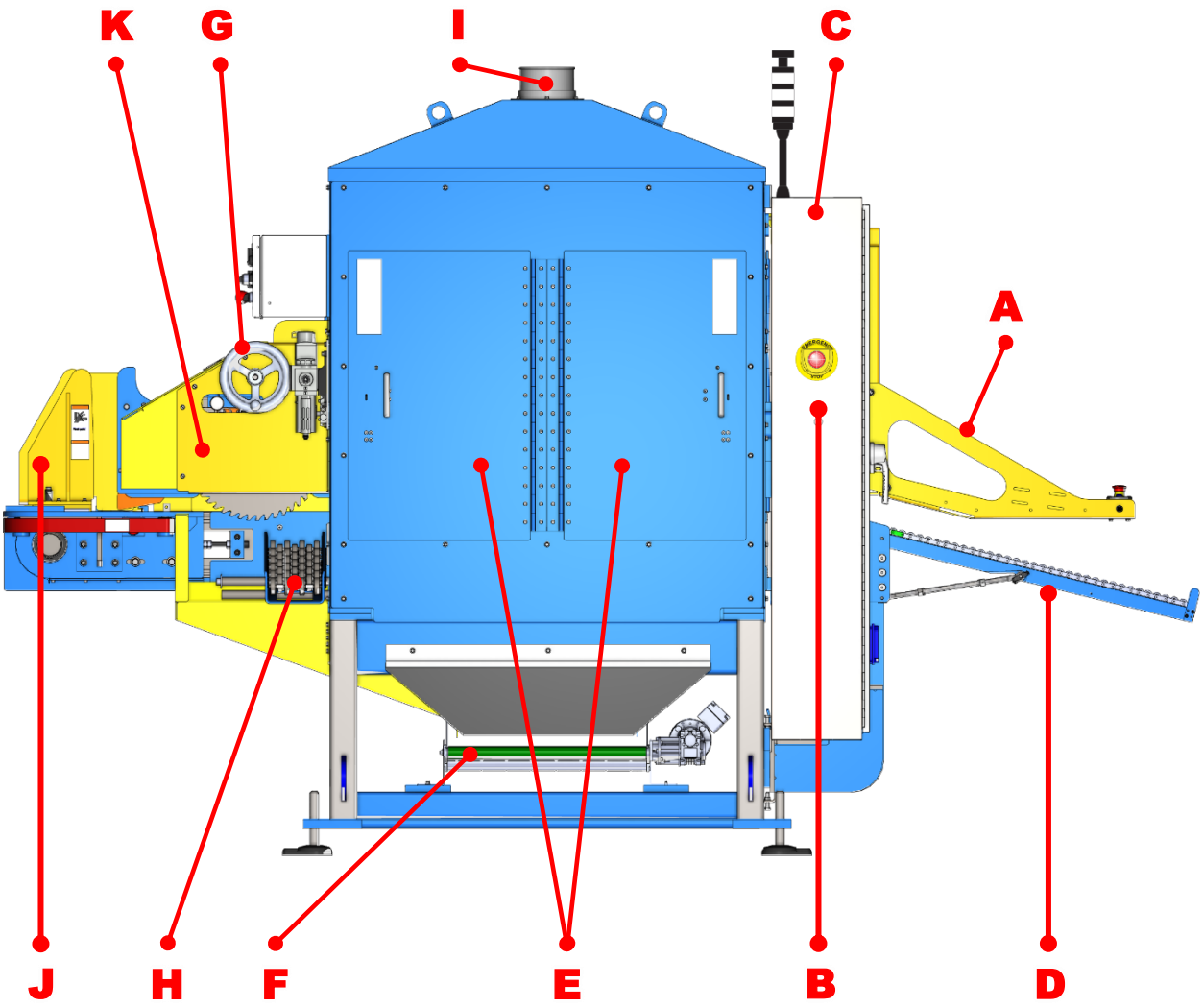
A – Rear Guard, B – Disconnection Switch, C – Emergency Stop,
D – Electrical Cabinet, E – Pause Request, **F – Outfeed Arms, G – Rear Access Panel,**
H – Waste Conveyor, I - Light & Horn Beacon.

Carriage End



A – Rear Guard, B – Waste Conveyor, C – Emergency Stop, D – Electrical Cabinet, E – Outfeed Arms, F - Dust Vent, G – Board Length End Stop, H – Magazine Width Stops.

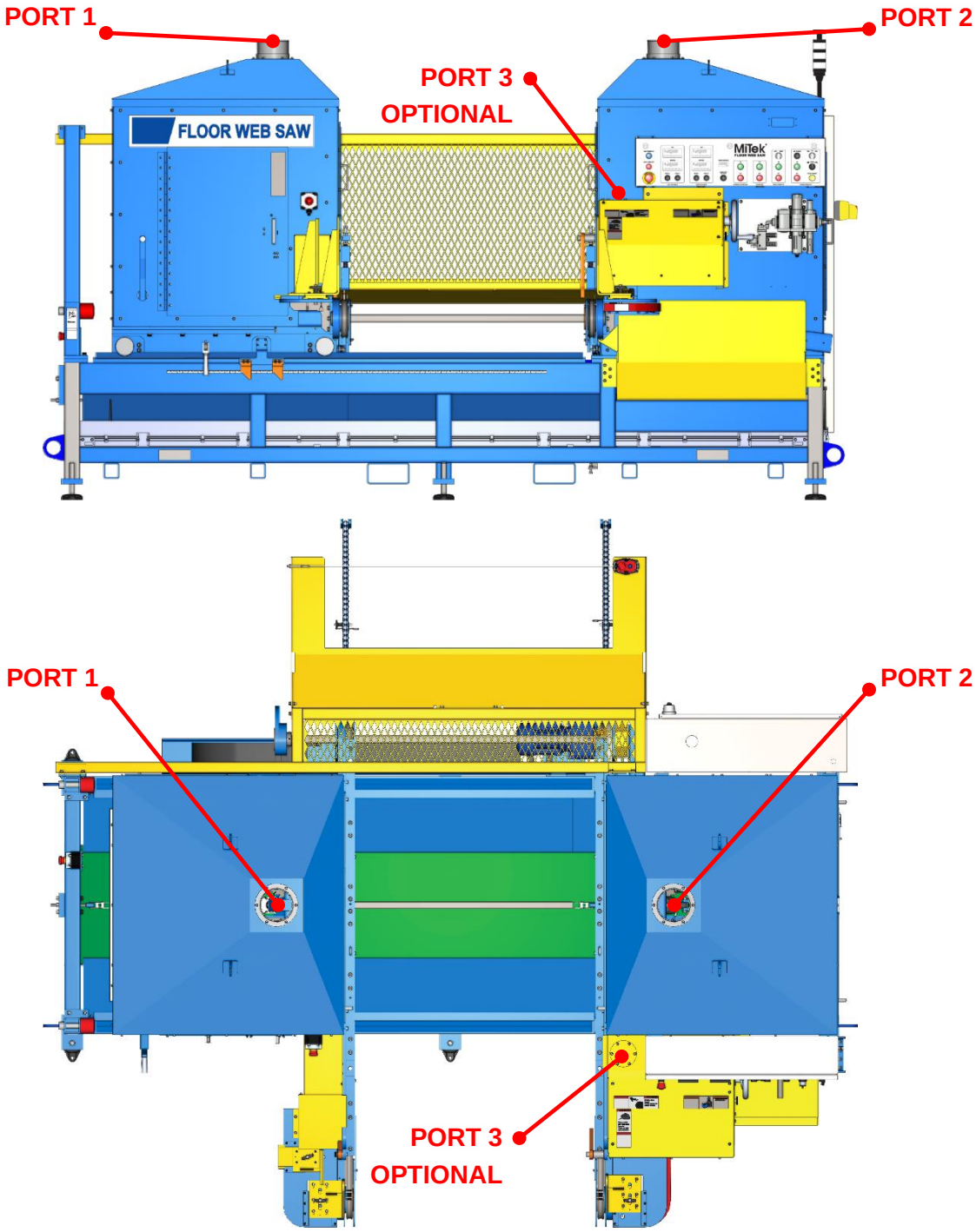
Stationary End



A – Rear Guard, B – Emergency Stop, C – Electrical Cabinet, D – Outfeed Arms, E – Rear Access Panel, F – Waste Conveyor, G – Hand Wheel, H – Cutoff Return Chute, I - Dust Vent, J – Magazine Width Stops, K – External Cut-Off Saw Housing.

Dust Collection

Three ports are provided for dust extraction from the saw chambers. We recommend working with a dust collection vendor for proper sizing. Ports 1 and 2 are 6”. Port 3 is 4”.



Technical Specifications

Specification	Data
Saw Blade	406.4 mm diameter (16")
Accuracy of each axis	1/16" and 1.0-degree angle accuracy

Lumber & Cut Capacity Specification

Specification	Data
Edge of board	1.5”
Face of board	2x3, 2x4, or 2x6
Maximum length of board	56”
Shortest length to exit saw	6”
Shortest length to enter saw via magazine feed	6”
Min. or Max. length of cut	Min. 6” - Max. 56”
Number of angle cuts	1 – 4

Motor Specification

Specification	Data
Saw blade	7hp - 3,500rpm
Waste conveyor and lumber exit chain	1 hp

Pneumatic Specifications

Specification	Data
Volume and Pressure	100 ± 20 psi with a flow of 5.0 ± 0.5 scfm.

Electrical Specification

Specification	Data
Voltage (VOC)	480 V
FLA PLUS CONTROLS (amps)	50.75
Disconnect switch fuses (amps)	70
Cycles (Hz)	60Hz
Phases	3

Dimensional Specification

Specification	Data
Floor Web Saw	14.0'(w) x 7.25'(d) x 7.25'(h)

Weight Specification

Specification	Data
Floor Web Saw	More than 8,000 lbs.

Environmental Specification

Specification	Data
Operating temperature	35°F to 104°F – 1.6C to 40C
Relative humidity	Up to 50% percent humidity.
Transportation and storage	-13°F to 131°F - -25C to 55C. It has been packaged to prevent damage from the effects of normal humidity, vibration, and shock.

	⚠ WARNING
	Read the equipment manual, safety labels, and all safety information provided before operating or maintaining this equipment.

Installation & Startup

Requirements to Meet for Installation

Refer to your original Pre-Installation document for all requirements that must be met before or during installation. Refer to the General chapter for machine specifications and requirements.

Moving the Equipment into Place

Follow these guidelines to safely move this equipment with a forklift or crane.

Transportation Equipment Requirements

The forklift, crane, chains, clevises, and all moving equipment must be rated for 150% of the weights listed on Technical Specifications on page 36 to abide by general safety rules.

Your Responsibilities

Installing the Equipment

- Follow installation instructions completely.
- Use proper lifting equipment rated for the proper weight.
- This equipment is not for use in a residential area.

Your Responsibilities During Installation

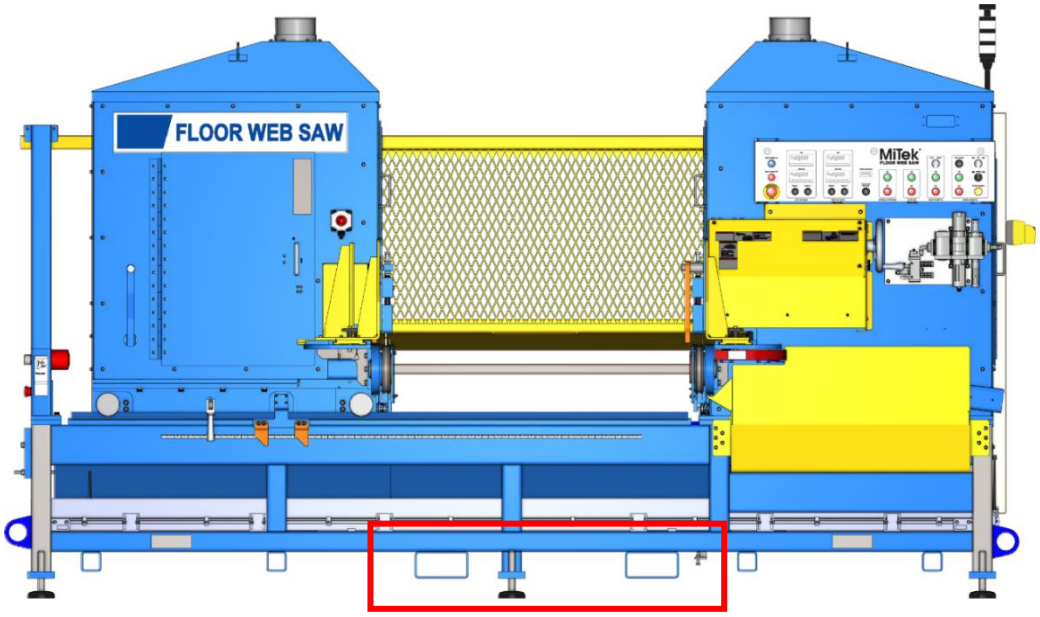
MiTek supervises the installation to ensure the system is installed properly and operates correctly. When the equipment is installed, MiTek will also provide operating and maintenance training. The customer is responsible for providing all labor and equipment needed to complete the installation.

Before Selling or Re-Installing

If you decide to move your equipment to another location or sell your system to another company, refer to the Pre-Installation document you received when you first purchased it. If you need another copy of that document, request it from MiTek.

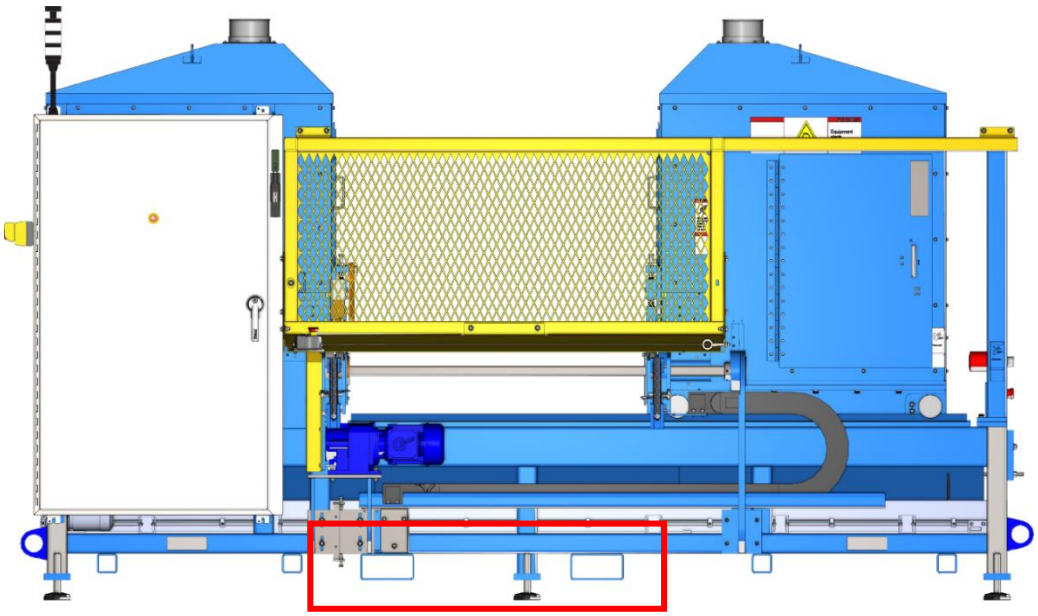
Lift Points

Front Lift Points



Back Lift Points

The machine is designed to be lifted from the rear, after removing the lower portion of the rear guard and the outfeed roller arms.



Marking Restricted Zone

The restricted zone must be marked and maintained so everyone near the equipment can clearly see the area where danger may exist. The customer is responsible for marking the restricted zone before startup, and maintaining the markings so it is clearly visible throughout the machine's life.

Your equipment arrived with Service Bulletin SB181, which includes restricted zone tape and instructions for installing it. You can order additional restricted zone kits using the contact information on Ordering Parts on page 30. Safety Tests Perform all tests listed in Safety Tests on page 23.

Installing Tape Purchased from MiTek

Before installing the restricted zone tape, clean the floor thoroughly to ensure the adhesive properly sticks to the floor.

1. Sweep the floor around the machine where the tape will be applied.
2. Mop the floor where the tape will be applied.
3. Wait for the floor to dry completely before continuing the procedure.

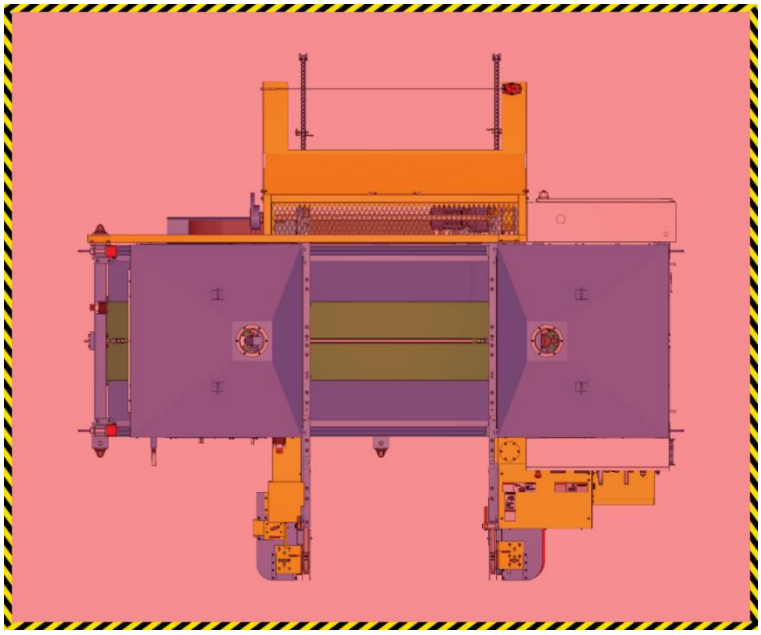
Marking Tape Location

1. Beginning at a corner of the machine on one end, measure outward 3 ft.
2. If marking around a gantry, run the gantry to one end of the line and mark outward 3 ft from the gantry platform.
3. If marking around a piece of equipment that does not have a marking layout included, mark outward 3 ft from the machine.
4. Make a mark on the floor at the proper location.
5. Repeat steps 1 and 2 for each corner of the machine.
6. Use a chalk line to make a line on the floor connecting the marks made in steps 2 and 3.

Placing the Tape

1. Peel the backing off the end of the tape.
2. Place the end of the tape with the wording facing out at an outside corner of the chalk line.
3. Press the tape firmly onto the floor. Ensure all bubbles and wrinkles are out to get the best adhesive retention.
4. Continue to remove the backing, unroll the tape, and press it firmly onto the floor until the entire perimeter has been marked with tape.
5. Remove the lockout/tagout devices and restart the machine.
6. Train all nonoperating facility employees to stay outside the tape when the machine is operating.

Restricted Zone



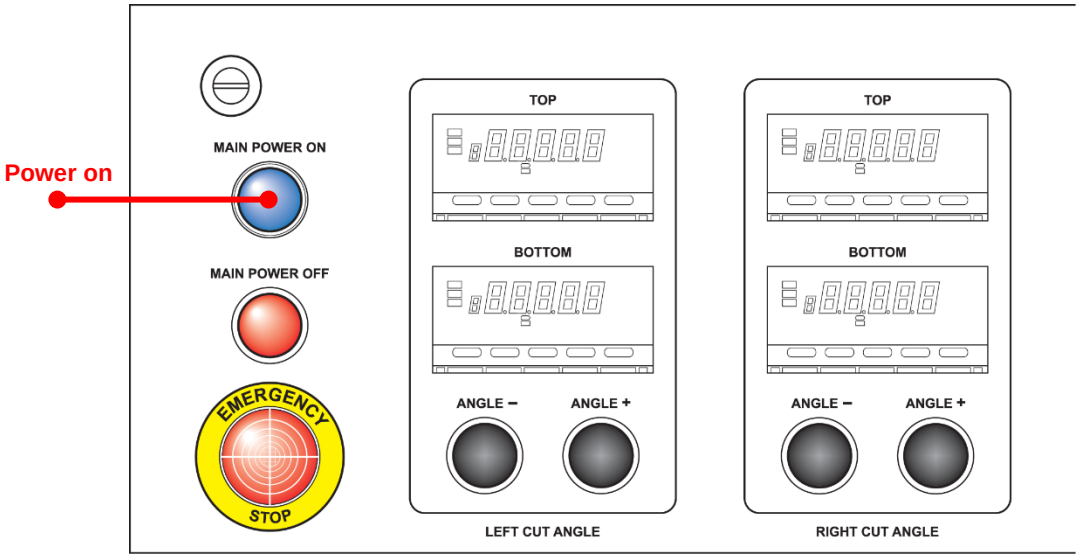
	⚠ DANGER
	Stay out of the restricted zone when equipment is in use. Serious injury or death may result if personnel are in the restricted zone. Always look for personnel in the restricted zone before operating equipment.

IMPORTANT: Perform all tests listed in Safety Tests on page 23.

Operating the Floor Web Saw

The **Floor Web Saw** is designed to cut **2x3**, **2x4**, and **2x6 boards**. Post-cut board length can range between **5-7/8" (5.875)** and 56". If one end is cut square (90°), then the minimum length becomes **5-7/8" (5.875)**. When there are 4 angle cuts the minimum cut length is 7". **Up to 10 boards** can be loaded into the magazine that feeds the **Floor Web Saw**. Power must be supplied to the saws before any cutting can occur, but some adjustments are possible with no power supplied to the **Floor Web Saw**.

Power On Machine



1. **Verify the main electrical disconnect is switched to ON.** See page 50.
2. Verify all E-Stops are released (see Emergency Stop Buttons).
3. Verify that the air supply is connected and the shut-off is set to SUP. The brake on the external cutoff saw only has a pneumatic brake that is also operated by the air supply.
4. **PUSH MAIN POWER ON and HOLD for 2 seconds** on the operator panel.

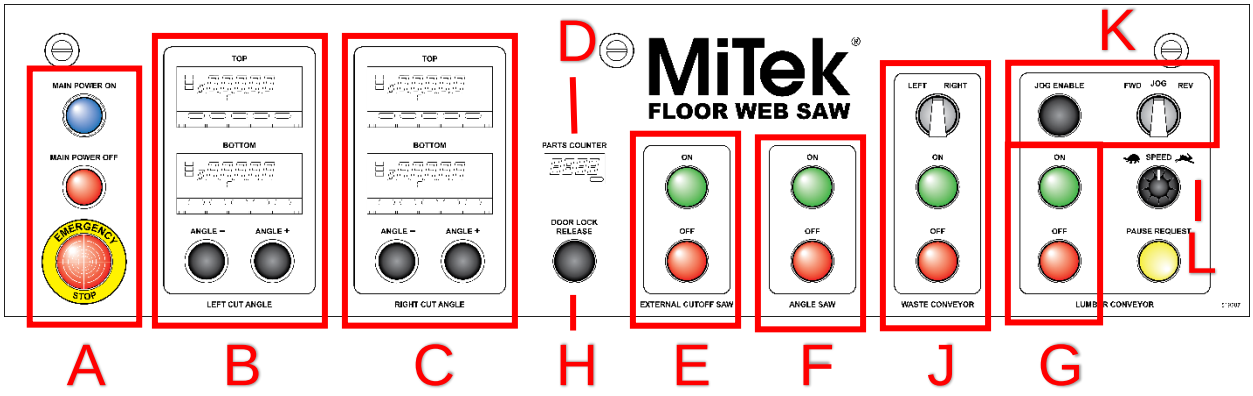
Stopping the Machine

The Floor Web Saw stops in four ways.

1. Someone presses any E-stop pushbutton.
2. A change to the tension of Safety Cable Pull-cord.
3. Someone presses the **DOOR LOCK RELEASE** button.
4. Pressing **EXTERNAL CUTOFF SAW OFF, ANGLE SAWS OFF, and/or MAIN POWER OFF** buttons. **Saw blades will stop spinning after 7 – 8 minutes.**

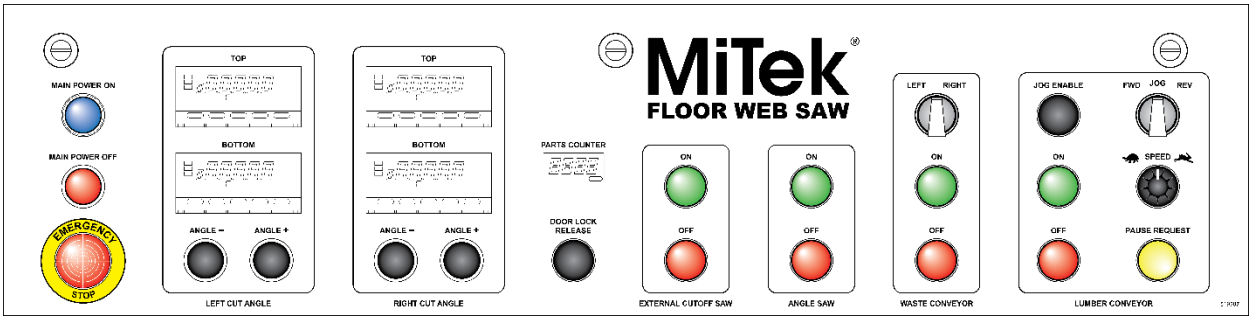
Operator Control Panel

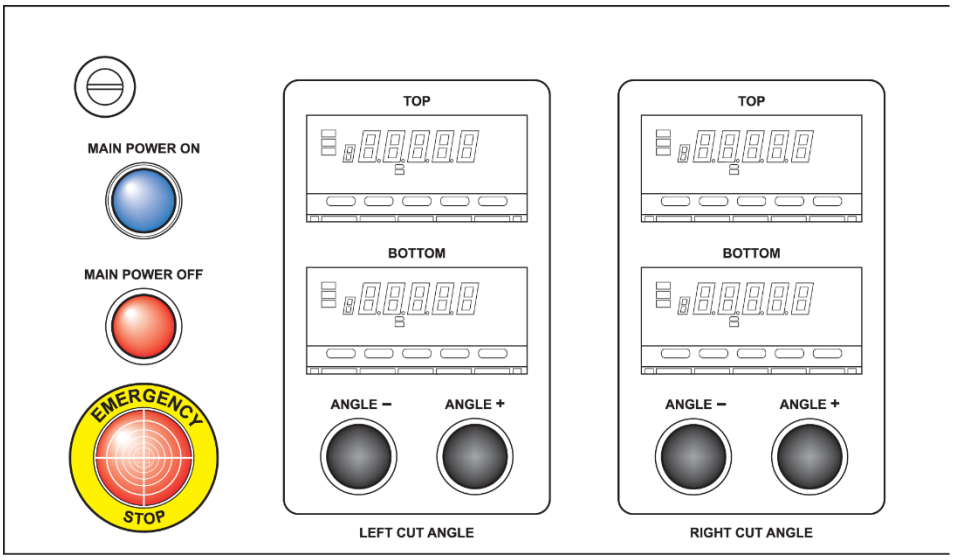
Under normal operating conditions, the conveyors' movements are entirely automated. However, some of them are controlled through the control panel.

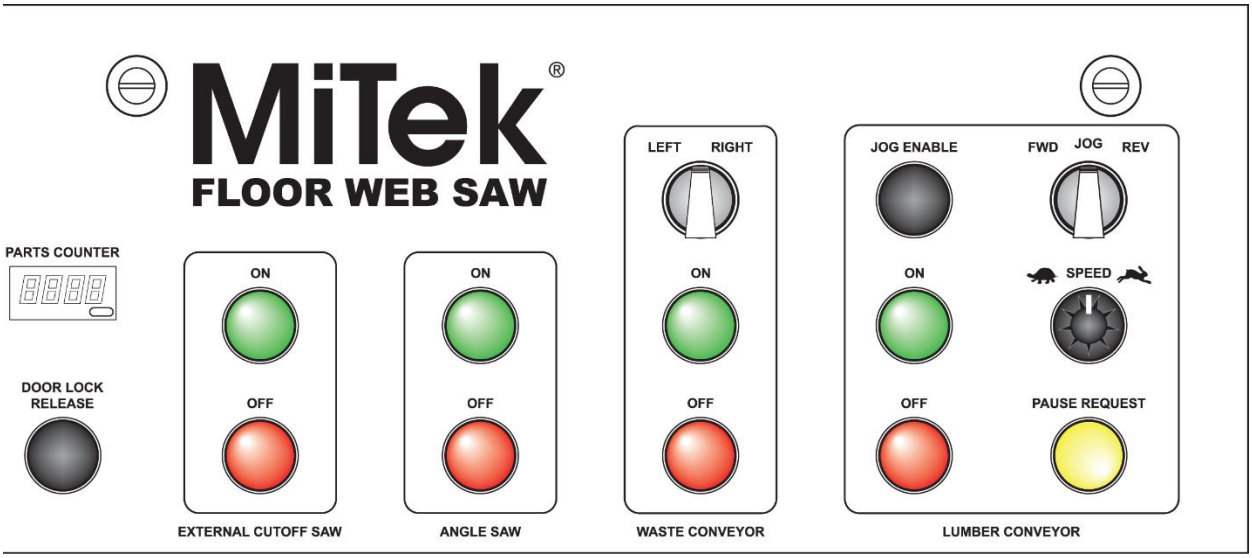


Button/Display		Function/Description
Main Power On	A	Push and hold for 2 seconds for power on. The Power On pushbutton lights up to indicate power is on. Main Power must be on for all other controls to work.
Main Power Off		Push to turn off power to the floor web saw.
Emergency Stop Button		**Push in to halt all Floor Web Saw and conveyor motions. Pull and twist to reset the Emergency Stop button**
Left Top Cut Angle	B	The angle cut by the left, rear saw (top of board)
Left Bottom Cut Angle		The angle cut by the left, front saw (bottom of board)
Left Angle -		Decreases the Left Top Cut Angle
Left Angle +		Increases the Left Top Cut Angle
Right Top Cut Angle	C	Displays the angle cut by the right rear saw (top of board)
Right Bottom Cut Angle		Displays the angle cut by the right front saw (bottom of board)
Right Angle -		Decreases the Right Top Cut Angle
Right Angle +		Increases the Right Top Cut Angle

Parts Counter / reset button	D	Counts the number of boards that have been cut by the floor web saw or the count was reset. Touch the reset button to return the counter to zero.
External Cutoff Saw On	E	Push and hold for 1 second for power on. The External Cutoff Saw On pushbutton lights up to indicate power is on.
External Cutoff Saw Off		Push to turn off power to the external cutoff saw. The External Cutoff Saw On pushbutton should be dark.
Angle Saws On	F	Push and hold for 1 second for power on. The Angle Saws On pushbutton lights up to indicate power is on.
Angle Saws Off		Push to turn off the power to the angle saws. The Angle Saws On the pushbutton should be dark.
Lumber Conveyor On	G	Push and hold for 1 second for power on.
Lumber Conveyor Off		Push to turn off power to the lumber conveyor.
Door Lock Release	H	Push to unlock all guard doors. All saws must be at a complete stop (zero speed sensors) before any door will unlock. Doors remain unlocked for 30 seconds. Door Lock Release button will not unlock any additional doors if there are any already open.
Infeed Speed dial	I	Change the speed of the infeed conveyor. Turn right to increase speed. Turn left to decrease speed.
Waste Conveyor On	J	Push and hold for two seconds to power on. The Waste Conveyor On pushbutton lights up to indicate power is on.
Waste Conveyor Off		Push to turn off the power to the angle saws. The Waste Conveyor On pushbutton should be dark.
Waste Conveyor switch		Sets the direction the waste conveyor moves.
Jog Enable	K	Push and hold to move the infeed (lumber) conveyor in the direction indicated by the Jog Infeed switch.
Jog Infeed switch		Sets the direction the infeed (lumber) conveyor moves when the Jog Enable button is pressed FWD or REV.
Pause Request	L	Push this button to engage the Pause Request


MAIN POWER ON
MAIN POWER OFF
EMERGENCY
STOP
TOP
BOTTOM
ANGLE –
ANGLE +
LEFT CUT ANGLE
RIGHT CUT ANGLE
MiTek
FLOOR WEB SAW
PARTS COUNTER
DOOR LOCK RELEASE
ON
OFF
EXTERNAL CUTOFF SAW
ANGLE SAW
LEFT
RIGHT
WASTE CONVEYOR
JOG ENABLE
FWD
JOG
REV
SPEED
PAUSE REQUEST
LUMBER CONVEYOR


MAIN POWER ON
MAIN POWER OFF
EMERGENCY
STOP
TOP
BOTTOM
ANGLE –
ANGLE +
LEFT CUT ANGLE
RIGHT CUT ANGLE


MiTek
FLOOR WEB SAW
PARTS COUNTER
DOOR LOCK RELEASE
ON
OFF
EXTERNAL CUTOFF SAW
ANGLE SAW
LEFT
RIGHT
WASTE CONVEYOR
JOG ENABLE
FWD
JOG
REV
SPEED
PAUSE REQUEST
LUMBER CONVEYOR

Emergency Stops

There are six Emergency Stop (E-Stop) buttons. Activating any of the Emergency Stop buttons stops all machine motions. The external cutoff saw should stop in 3 seconds, but the internal angle saws will spin down gradually.

Use E-stops only in emergencies. Using an E-stop to stop the machine regularly may cause two problems. First, it causes excessive wear on components. Second, it stops the saw from cutting and may interfere with the workflow.

(1) The Emergency Stop button on the Operator Control panel: To activate this E-Stop, push it in. Pull out and twist this E-Stop to reset it.

(2) The Emergency Stop button behind the red bar near the operator station: To activate this E-Stop, push the red bar IN. Pull out and twist the button behind the bar to reset.

(3/4/5) The Emergency Stop buttons on the cutting cabinets: To activate any of these E-Stops, push it in. Pull out and twist the same E-Stop to reset it.

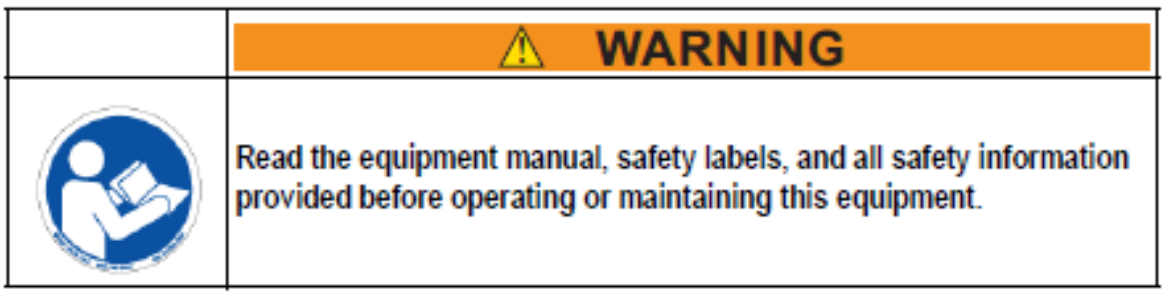
(6) The Safety Pull-Cord (perimeter safety cable): Activates automatically when the tension wire that spans the space between the cutting cabinets changes enough to trigger the spring. It will also activate if the button is pressed.

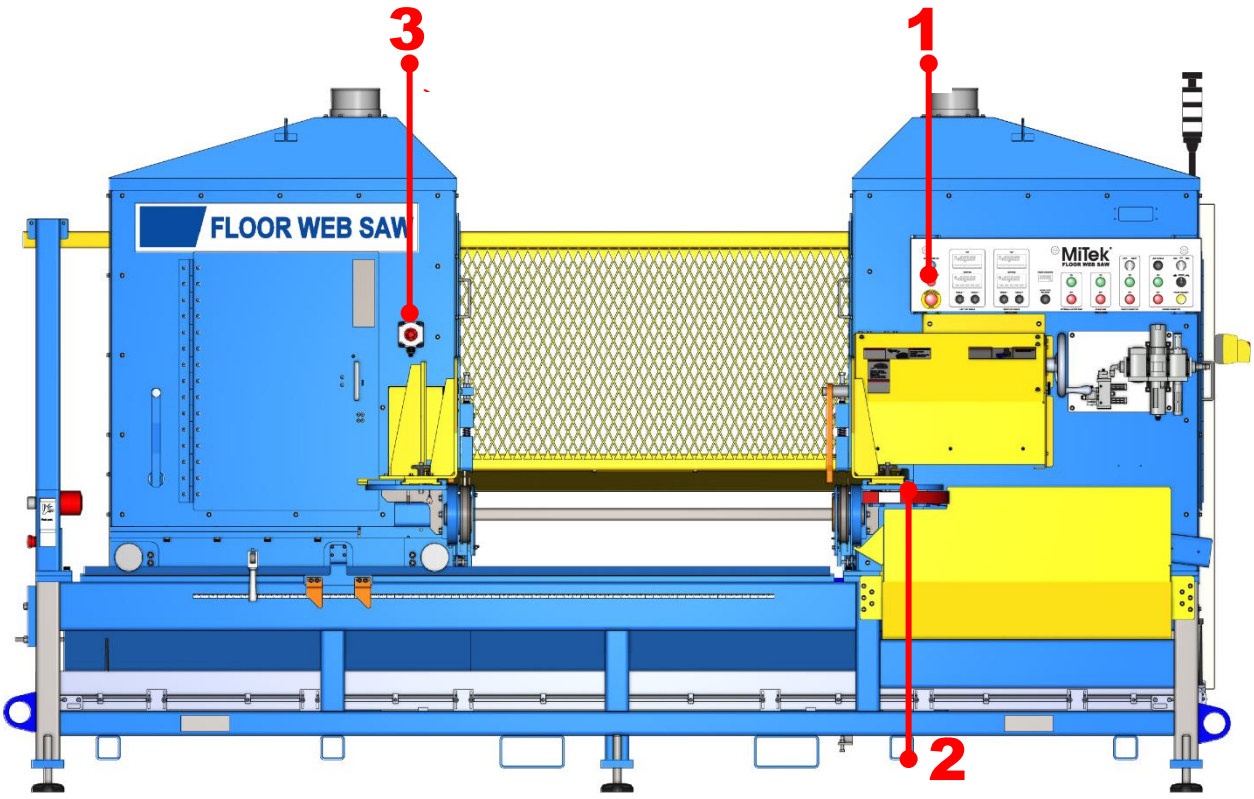
When activated, the status lights on the button will turn red. To reset after a button press, pull out and twist the button and push the blue button.

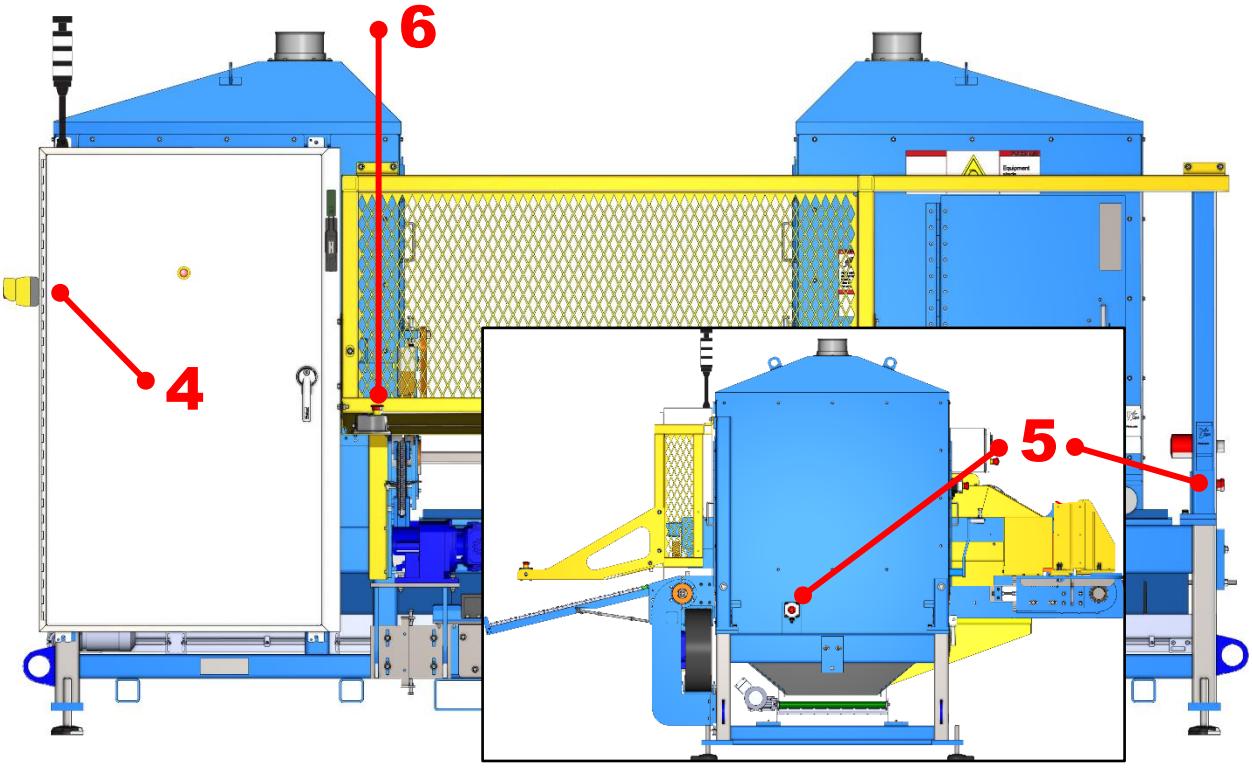
If the pull-cord was triggered, reposition the wire to the correct tension (the status lights will turn amber), then push the blue button to reset. When properly reset, the status lights turn green.

- **Flipping the disconnect switch on the main electrical enclosure to the On position supplies power to that enclosure.**
- **Flipping the disconnect switch handle on the main electrical enclosure to the Off position removes power from that enclosure.**

The disconnect switch on the main electrical enclosure should be turned to the **Off position** when the **Floor Web Saw** is not in use.




3
1
FLOOR WEB SAW
MiTek
2


6
4
5

Light and Horn Beacon

The beacon is located on top of the machine's main electrical enclosure. No lights indicates that no E-Stops are activated. Activating the **Pause Request** sounds the horn. It indicates the following:

RED

Active alarm or E-Stop.

Blinking red light indicates Door Latch Self Check Fail

YELLOW

There is an operational movement within the system.

When the saw blades are in motion.

Pause request will sound alarm as well.

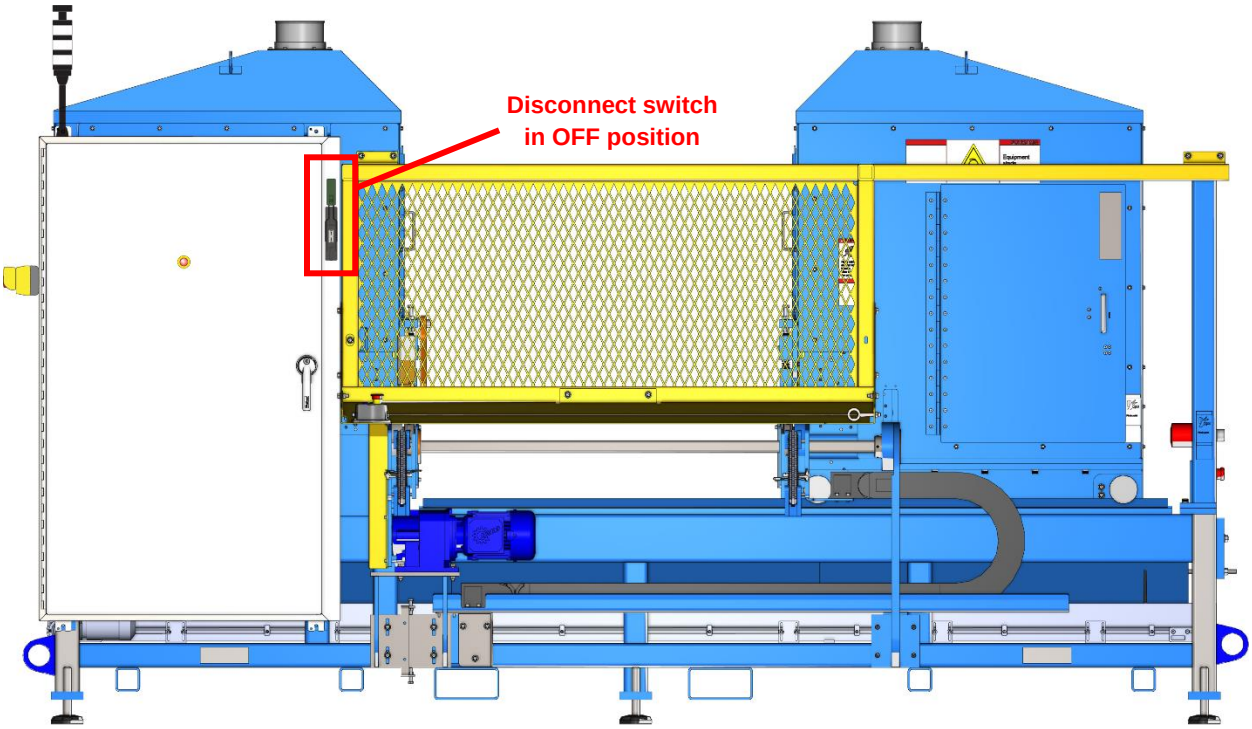
GREEN

The system is on and idle.

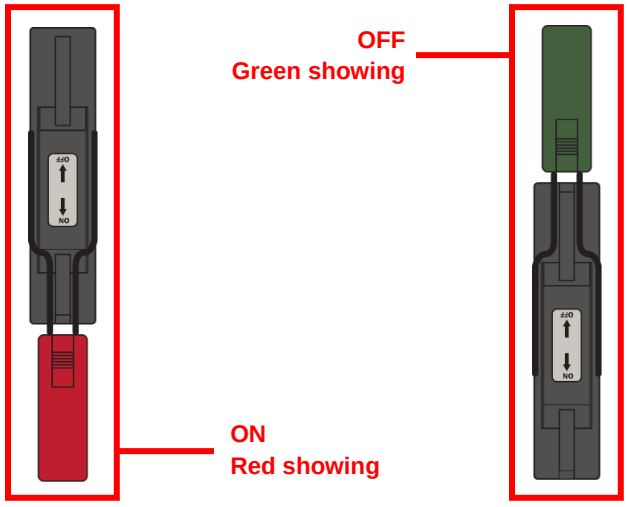
Green will power on if there is no active alarm.

Disconnect Switch

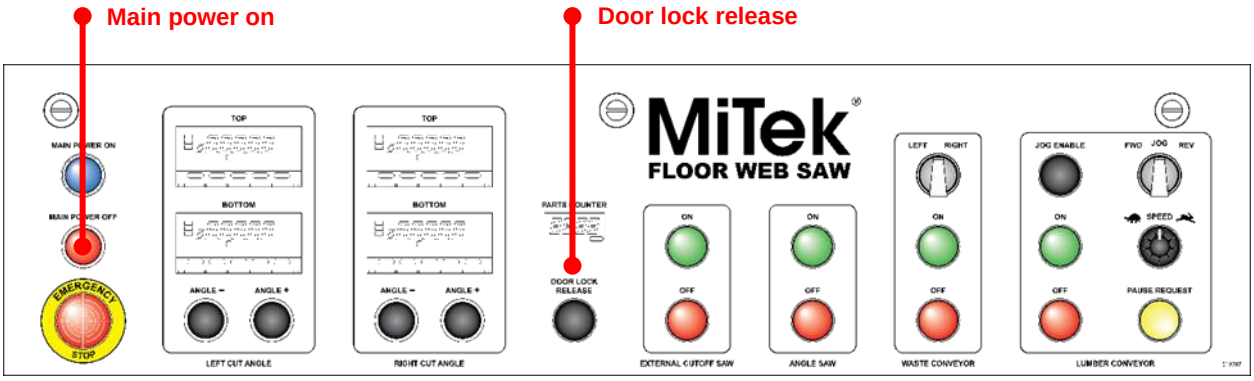
The disconnect switch handle is located on the main electrical enclosure. That is mounted to the rear of the stationary cabinet.



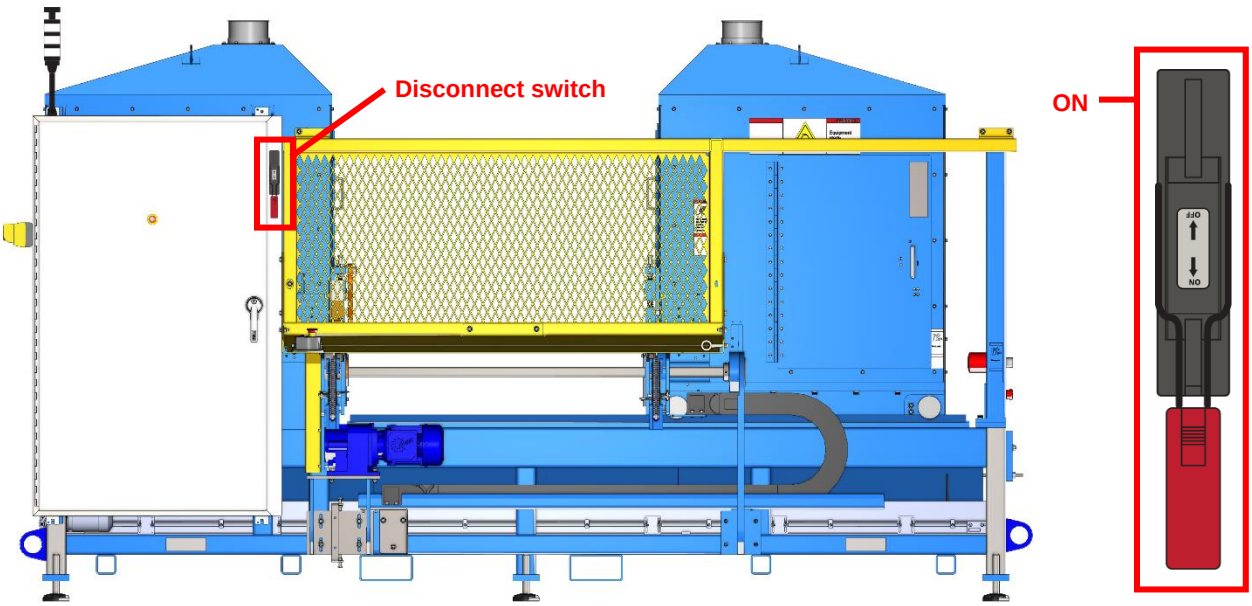
- Turning the disconnect handle to the **On position** supplies electrical power to the entire machine.
- To remove power to the machine, turn the disconnect handle to the **Off position**.
- The disconnect handle should be turned off when the machine is not in use.



Door Lock Release



1. Push the red main power off button on the Floor Web Saw control panel.

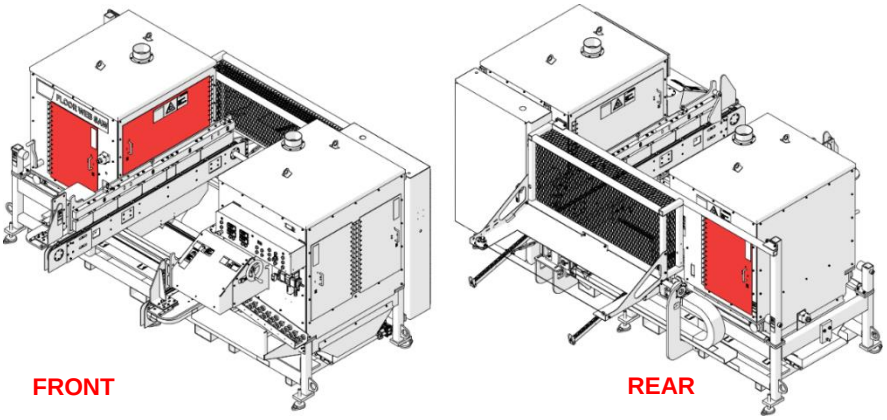


2. Press the Door Lock Release button.
3. Open any cabinet door as many times as needed. For how long you want.
4. Close all doors.
5. Verify that the doors are securely locked.
6. Press the blue power on button on the control panel once to lock the doors.
7. Press the blue power on button on the control panel again to power on the saw.

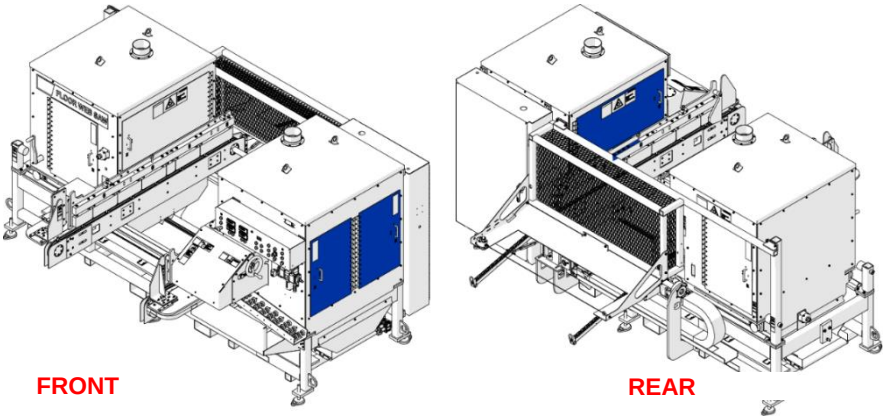
Manual Door Unlock

1. Lockout/tagout the Floor Web Saw.
2. Manually unlock doors using a flathead screwdriver.
3. Press the Door Lock Release to silence horn alarm.
4. Red blinking lights on the door interlock. Indicates door latch self-check fail.
5. Manually lock doors using a flat head screwdriver.
6. Hold main power off button for 4 seconds. To reset the door latches. One beep indicates a reset was completed.
7. If saw is powered on only use the door lock release.

Unlock Access Doors

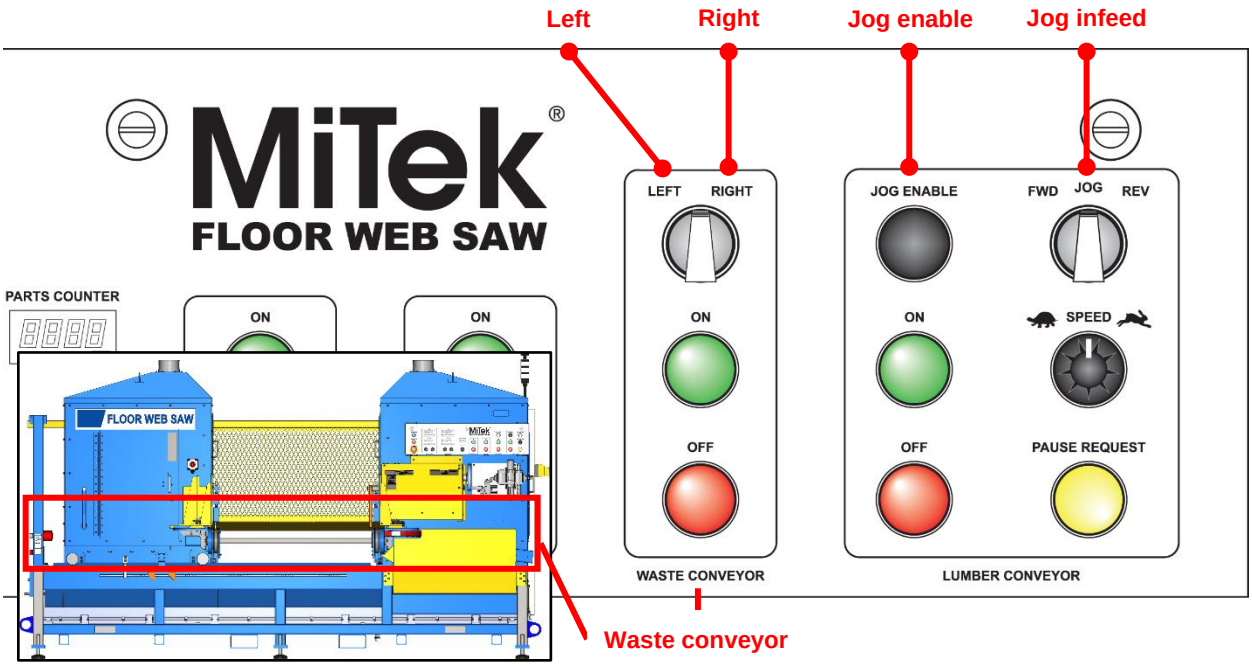


There are three access doors on the carriage cabinet.



There are three access doors in two locations on the stationary cabinet.

Waste Conveyor



Toggle the **WASTE CONVEYOR SWITCH** to **LEFT** or **RIGHT.** This controls the direction in which the waste conveyor carries away waste lumber after cutting.

Operating Lumber Conveyor

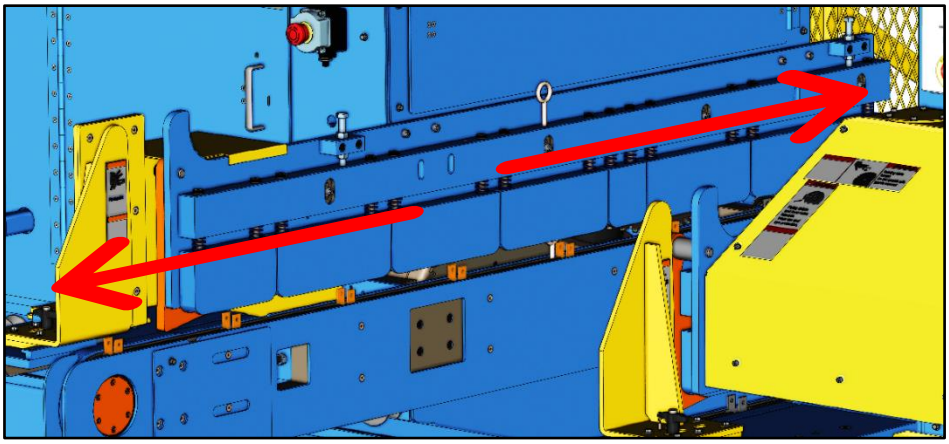
A saw operator can load up to 10 boards into the magazine when all preparations are complete. Return to the operator station and push the **LUMBER CONVEYOR ON** to start the infeed conveyor lumber, which moves the boards through the cutting process.

When all cutting is complete, push **LUMBER CONVEYOR OFF** to turn off the infeed conveyor. Push **ANGLE SAWS OFF** and **EXTERNAL CUTOFF SAW OFF** to stop the saws.

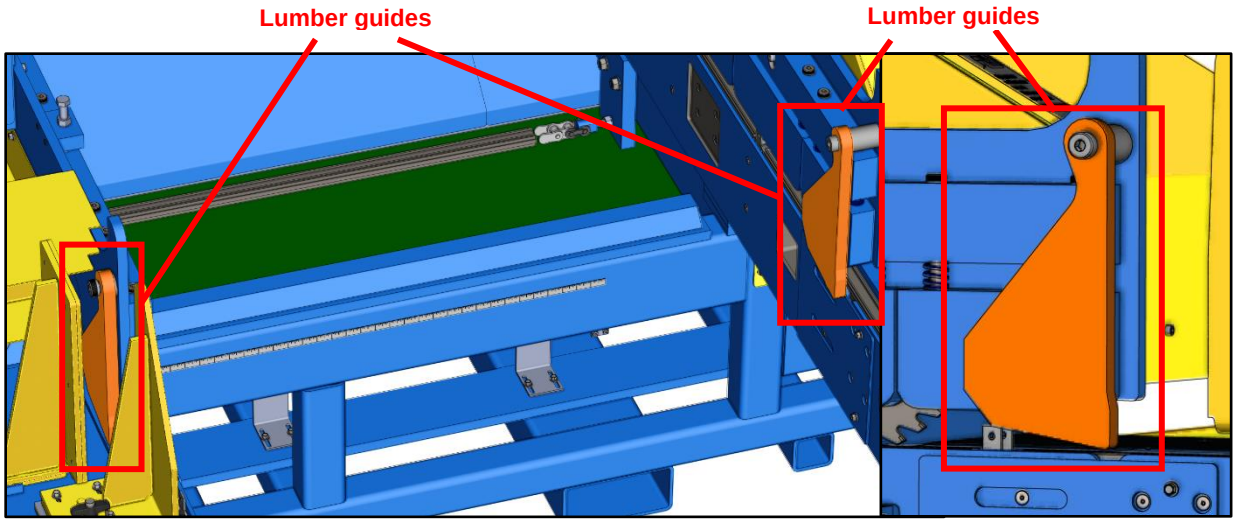
Cut-boards exit the cutting area, where they must be removed by hand.

Jogging the Infeed Conveyor

Jogging the Infeed Conveyor is to be used to remove any jams that may occur in the lumber conveyor. With power supplied to the machine, turn the **JOG INFEED switch** to **LEFT (toward cutting cabinets)** or **RIGHT (away from cutting cabinets)**. Touch and hold **JOG ENABLE** to move the conveyor in the direction set by the **JOG INFEED switch**. There is a slight delay in the chain stopping after the button is released.

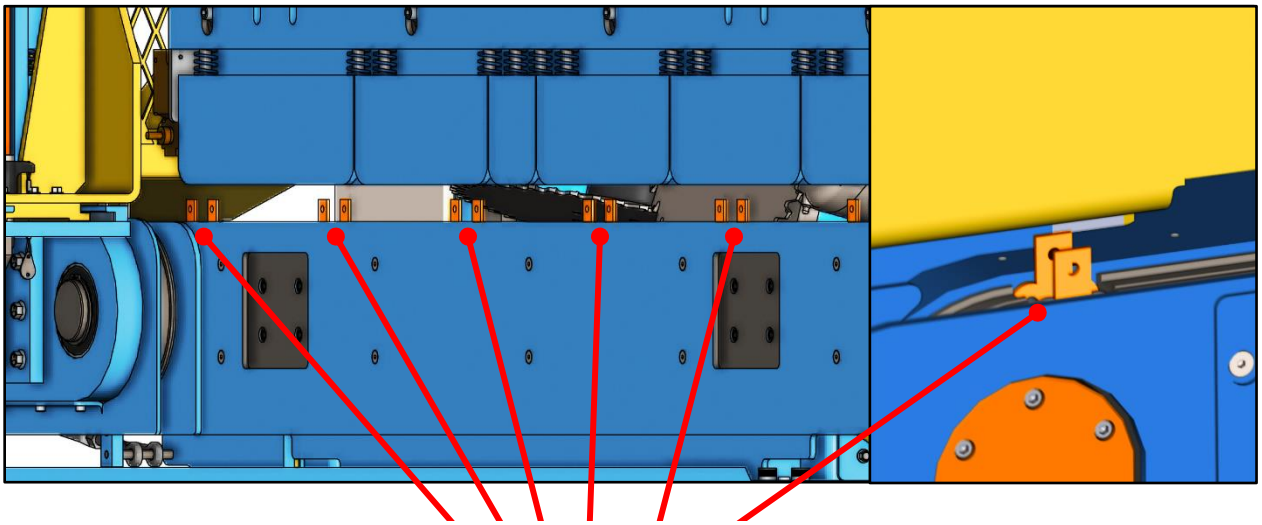


Lumber Guides



The **Lumber Guides** are designed to align the lumber on the lumber conveyor flush against the conveyor chain dog teeth. This ensures that each board is held at a consistent angle while being pulled through the saw enclosure. **(This was made to prevent jams when the boards were not relatively straight when going through the machine).**

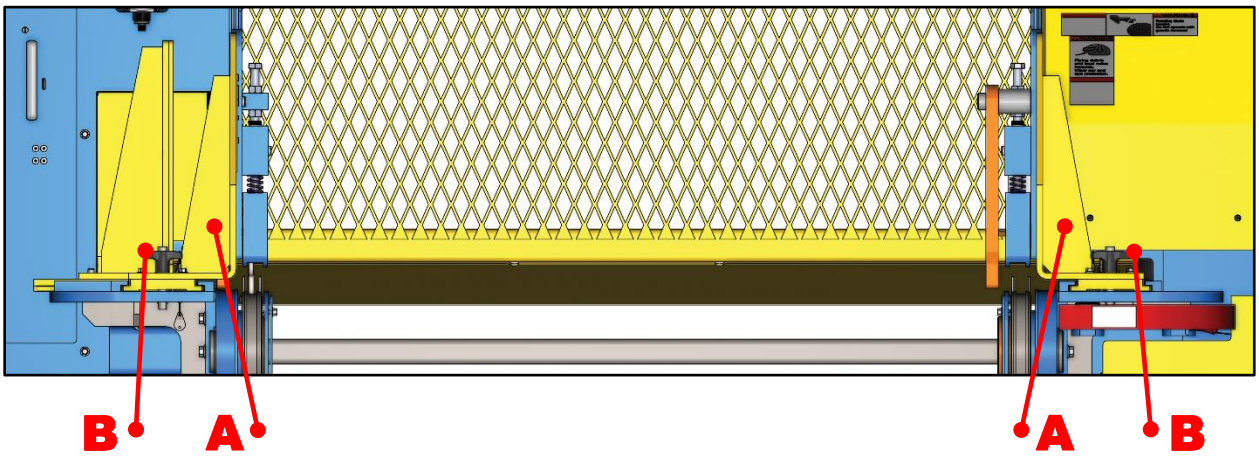
Moving Dog Teeth

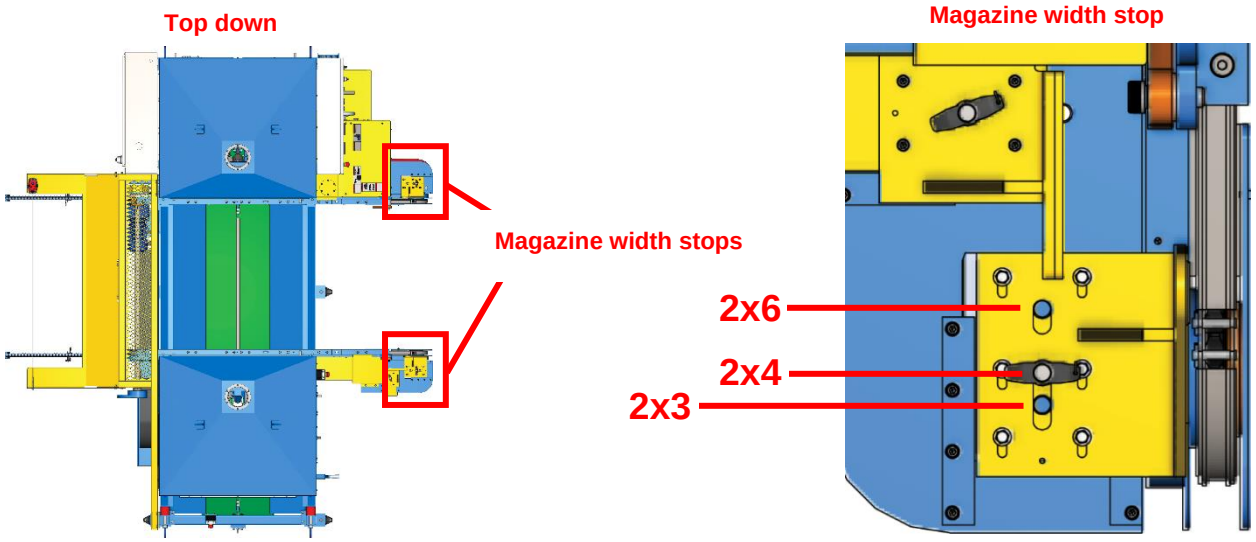


Before operating, verify that no conveyor chain dog teeth are in the magazine chute; if necessary, jog the lumber conveyor to clear dog teeth from the chute (see **JOG INFEED CONVEYOR section**).

Adjusting Magazine Width Stops

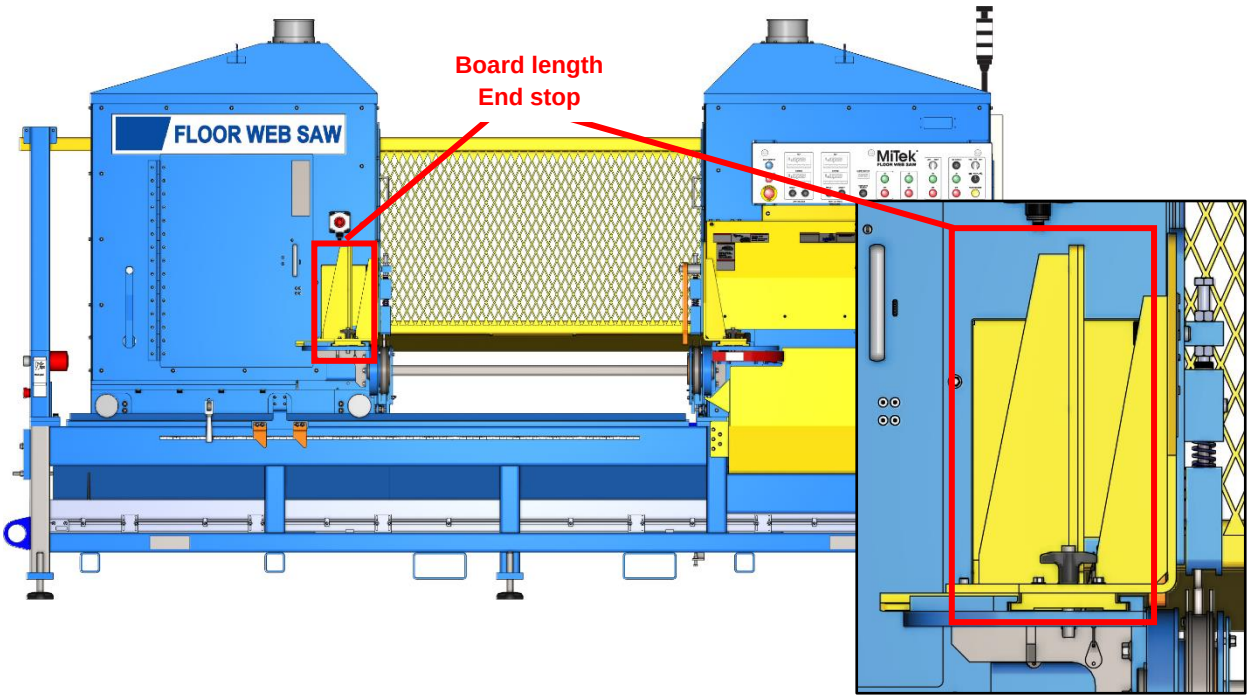
The **Floor Web Saw** can cut **2x3, 2x4**, and **2x6 boards**. There are two **Magazine Width Stops** (**A**) on either side of the infeed chain conveyor, held in place with **pins** (**B**), should be adjusted to the proper width before boards are loaded into the magazine for cutting.



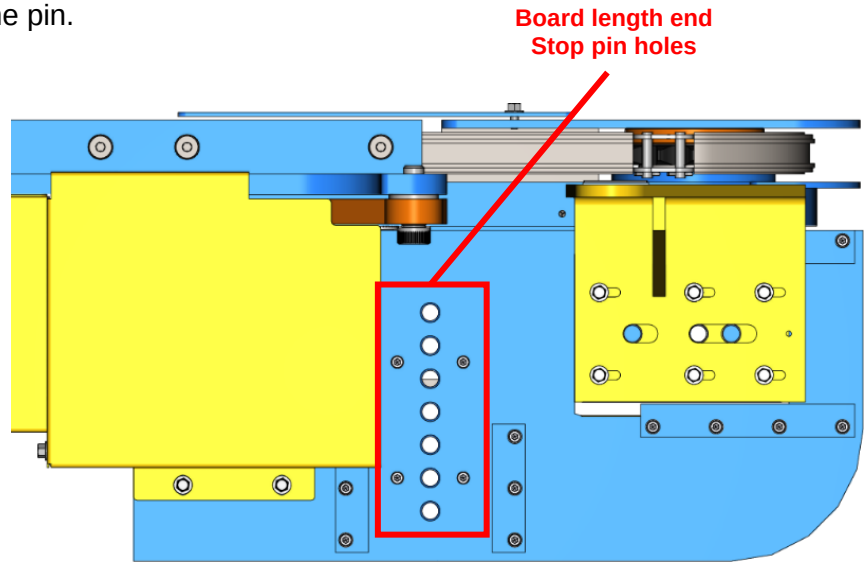


1. To adjust the **Magazine Width Stops** (**A**), push the Blue Button in on top of the pin (**B**).
2. Remove the pin (**B**) from the hole.
3. Move the **Magazine Width Stop** (**A**) to its new position and align it with one of the three holes, and replace the pin (**B**) to secure the **Magazine Width Stops** (**A**).
4. Repeat for the other side, ensuring both **Magazine Width Stops** (**A**) are set to the same width.

Adjusting the End Stop Position

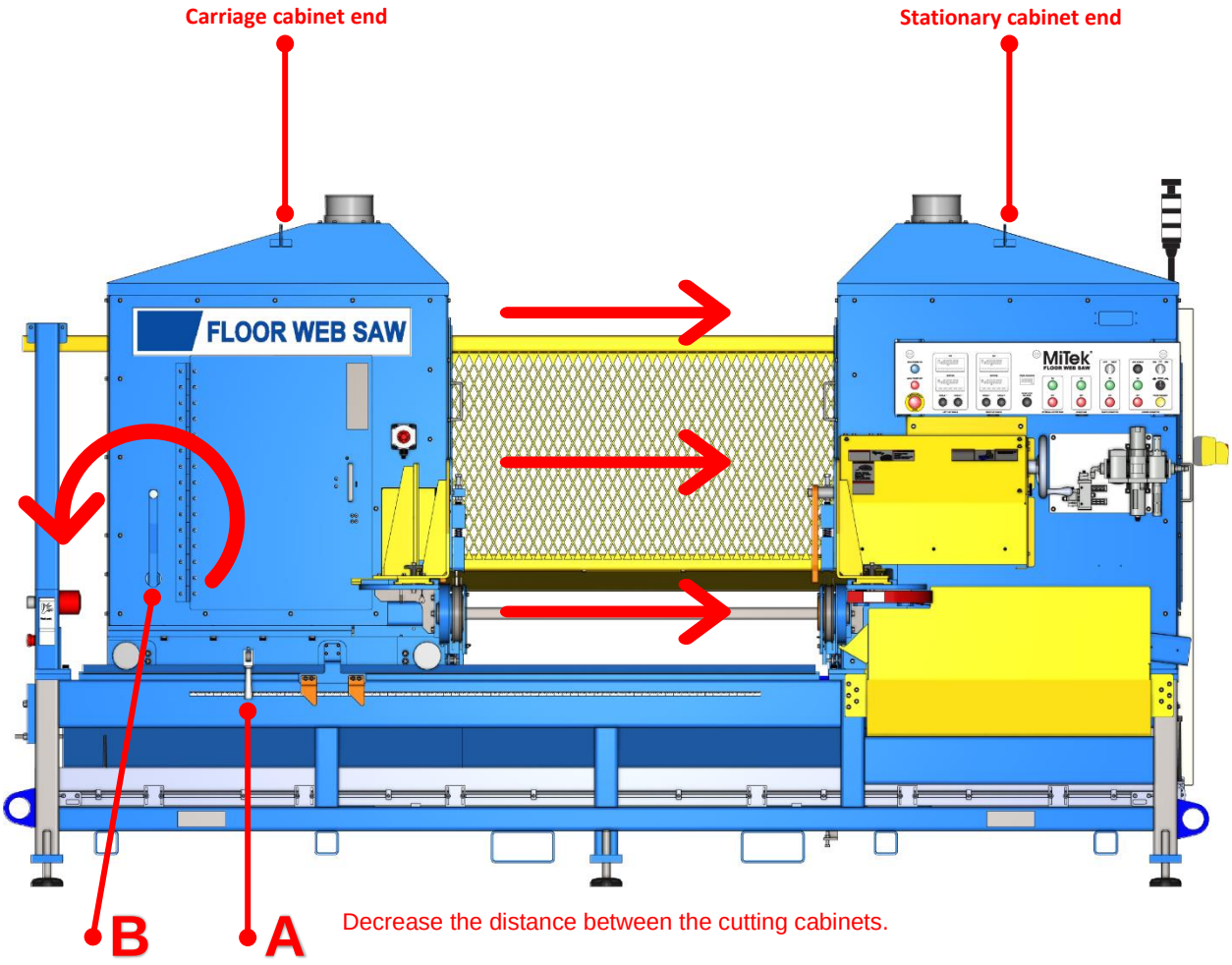


1. Push the blue button on top of the pin to remove it from a hole.
2. Move the **Board Length End Stop** to its new position, align it with one of the holes, and replace the pin to secure the **Board Length End Stop**.
3. Adjust the **Board Length End Stop** to help stabilize the boards loaded into the magazine for cutting.
4. Replace the pin.



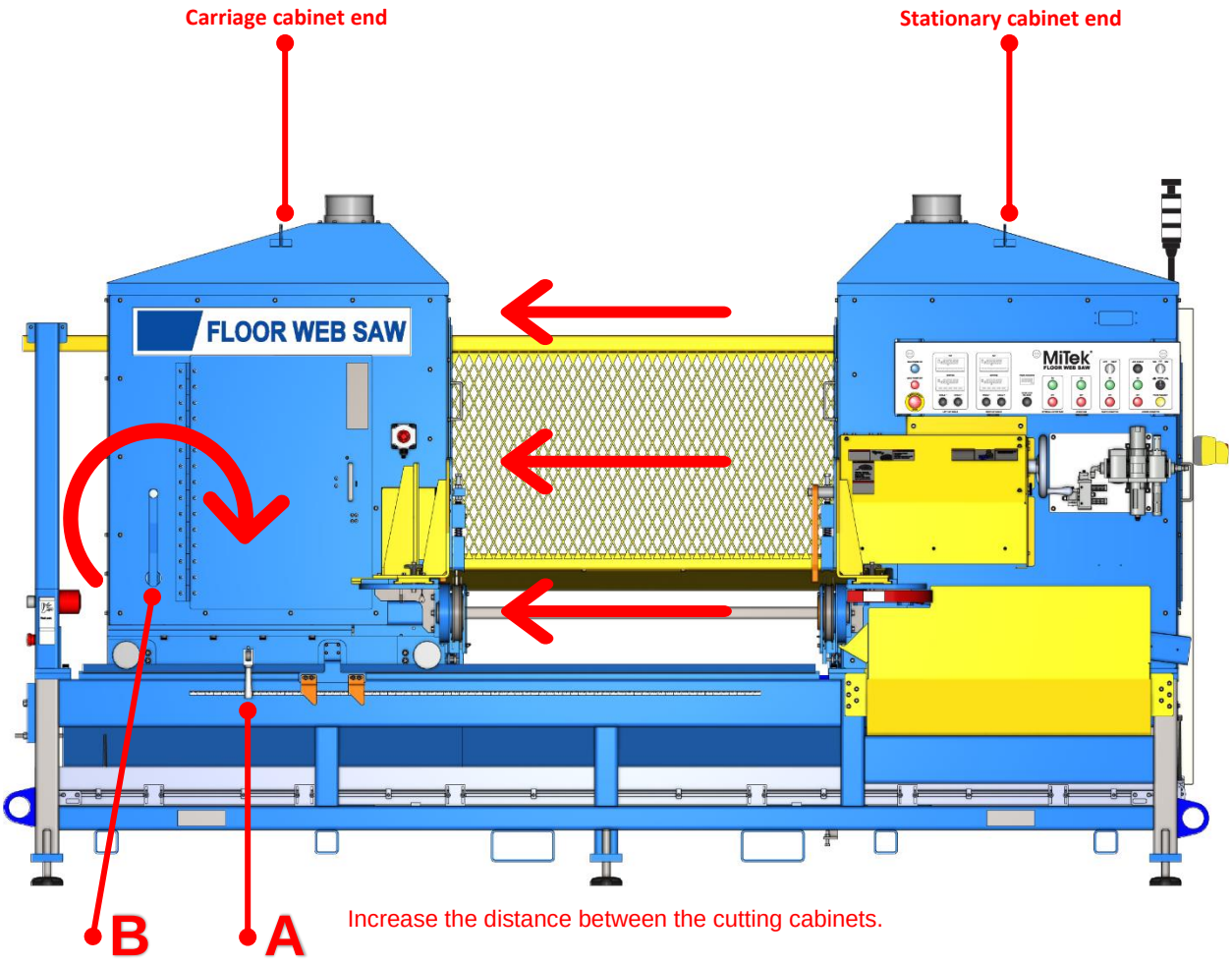
Adjusting the Distance Between Cutting Cabinets

To adjust the distance between cutting cabinets (and length of cut board), first power down the saw, then **release the lock** (**A**). By pulling up on the handle.



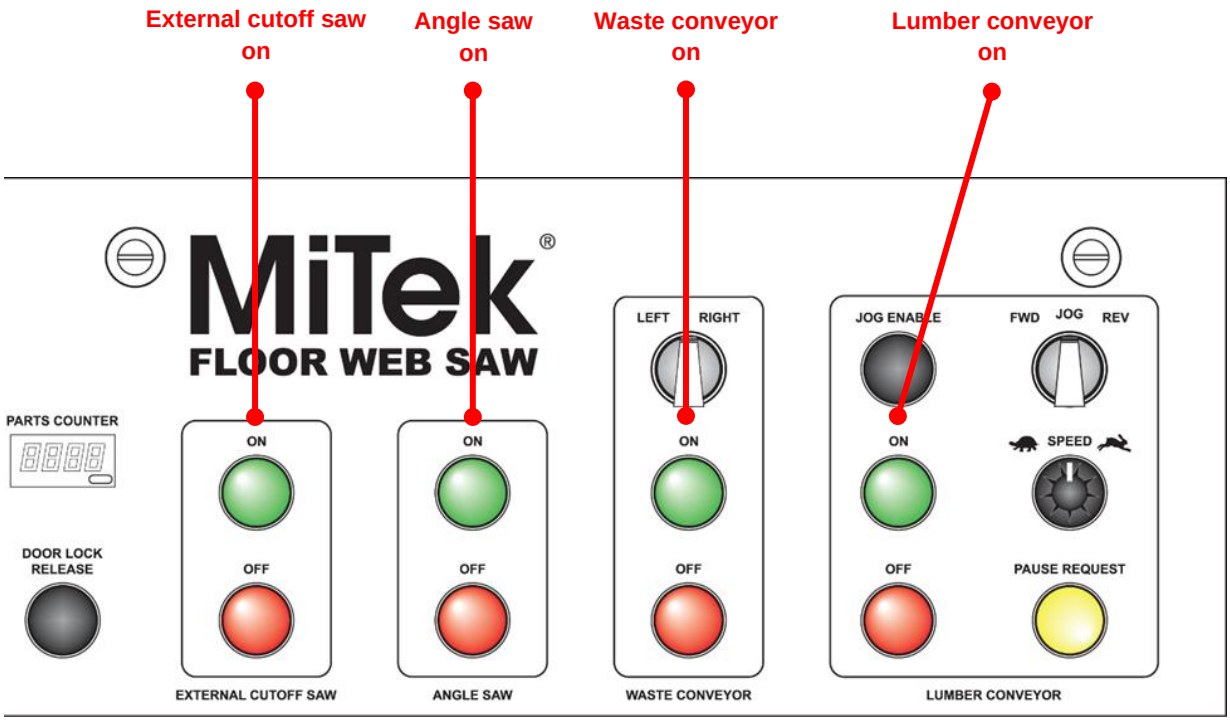
Turn the crank (**B**) on the **Carriage Cabinet counterclockwise** to decrease the distance between cutting cabinets.

Turn the crank (**B**) on the **Carriage Cabinet clockwise** to increase the distance between cutting cabinets.



Reset the lock (**A**) and **confirm that it's locked before resuming operation** of the saw. By pushing the handle down.

Cutting

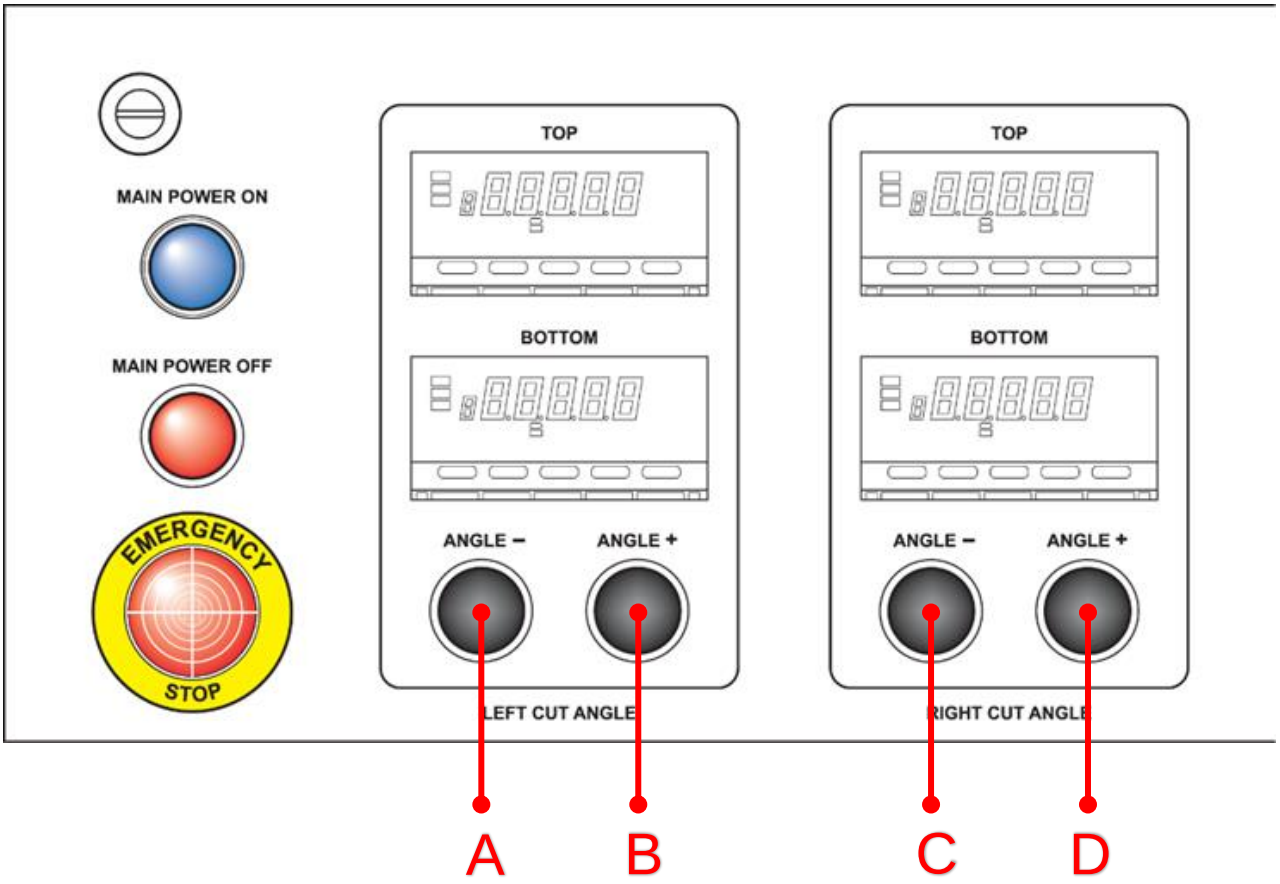


1. Verify that **no E-Stops are engaged**. See page 47-48.
2. Make any necessary adjustments to the Floor Web Saw's settings/configuration:
   - Adjust magazine width (the holes are set for 2x3, 2x4, and 2x6)

     see **CHANGE MAGAZINE WIDTH,** see page 56.
   - Adjust **End-stop width,** see page 57**.**
   - Adjust the length of the cut board – see **ADJUSTING THE DISTANCE BETWEEN THE CARRIAGE CABINET END/ADJUSTING ANGLED SAW POSITIONS,** see page 58-59.
3. When all adjustments have been made, move to the operator station, and verify the cutting area is clear.
4. Power the saw on. See page 43.
5. Verify the PSI is set at 100psi. See page 80.
6. Verify The light beacon is green.
7. Adjust angles – see **ADJUSTING THE ANGLE OF END CUTS/ADJUSTING ANGLE SAW POSITIONS,** see page 62-63.

8. **Push the EXTERNAL CUTOFF SAW ON** and hold for 1 second to turn on the cutoff saw.
9. **Push ANGLE SAWS ON** and hold for 1 second to turn on the angle saws.
10. **Push the WASTE CONVEYOR ON BUTTON** and **hold for 1 second to turn on the WASTE CONVEYOR.**
11. Verify the waste conveyor is moving in the correct direction (see **SET WASTE CONVEYOR DIRECTION section**). See page 58.
12. Load the **Magazine Width Stops** with 10 boards.
13. **Power on the Lumber Conveyor.** See page 53.

Adjusting the Angle of End Cuts



- **A - Touch the Left Angle- button** to decrease the top cut angle/increase the bottom cut angle of the left edge of the boards being cut.
- **B - Touch the Left Angle+ button** to increase the top cut angle/decrease the bottom cut angle of the left edge of the boards being cut.
- **C - Touch the Right Angle- button** to decrease the top cut angle/increase the bottom cut angle of the right edge of the boards being cut.
- **D - Touch the Right Angle+ button** to increase the top cut angle/decrease the bottom cut angle of the right edge of the boards being cut.

Each **handwheel** inside a cutting cabinet moves one of the two motors to one of three positions with stops (see **FORWARD/MID/BACK STOP**) that are initially adjusted during assembly before the trunnions are installed.

1. Verify the saw blades position before changing the angle of the saw blade.
2. **If the saw blade is at 45 degrees, it is safe to change the saw blades angles:**
    - Power the saw blades down.
    - Wait until the saw blades come to a complete stop. This takes 7 – 8 minutes.
    - Turn the hand wheel in a Clockwise rotation. This moves the motor back toward the operator. See **UNLOCK ACCESS DOORS** for access to hand wheels.
    - Change the saw blade angles.
    - Move the saw blades and motor to the forward most position.
    - Secure the cabinet doors closed.

3. **If the saw blades are at 75 – 90 degrees, you must do the following:**
    - Power the saw blades down.
    - Wait until the saw blades come to a complete stop. This takes 7 – 8 minutes.
    - Turn the hand wheel in a Clockwise rotation. This moves the motor back toward the operator. See **UNLOCK ACCESS DOORS** for access to hand wheels.
    - Change the saw blade angles.
    - Move the saw blades and motor to the forward most position.
    - Secure the cabinet doors closed.

Prevent Saw Blades From Hitting the Cabinet

NOTICE

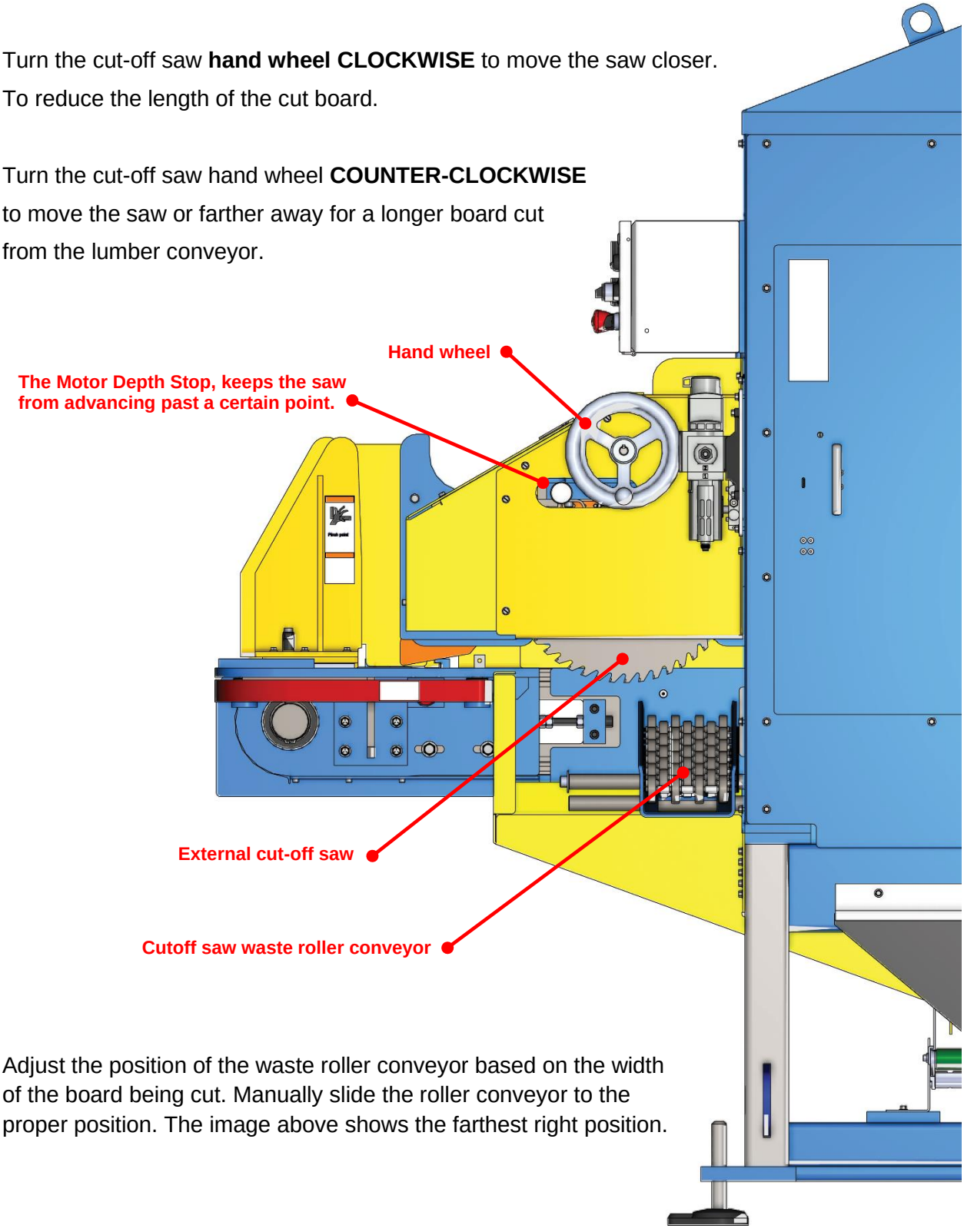
Before changing the saw blade angle, ensure that the motors are in the mid stop or back stop position. Failure to do so may result in the saw blades contacting the cabinet while in motion, potentially causing equipment damage.

1. Power the saw blades down. See page 43.
2. Wait until the saw blades come to a complete stop. This takes 7 – 8 minutes.
3. Unlock doors. See page 51.
4. Advance both the **Carriage end** and **Stationary end** motors until they bottom out on the **Mid Stop** or **Back Stop**, by turning the hand wheels in a Clockwise rotation.
5. Secure the cabinet doors closed.
6. Change the saw blades' angle. See page 62.

Adjust Cutoff Saw Position & Cutoff Saw Waste Roller Conveyor

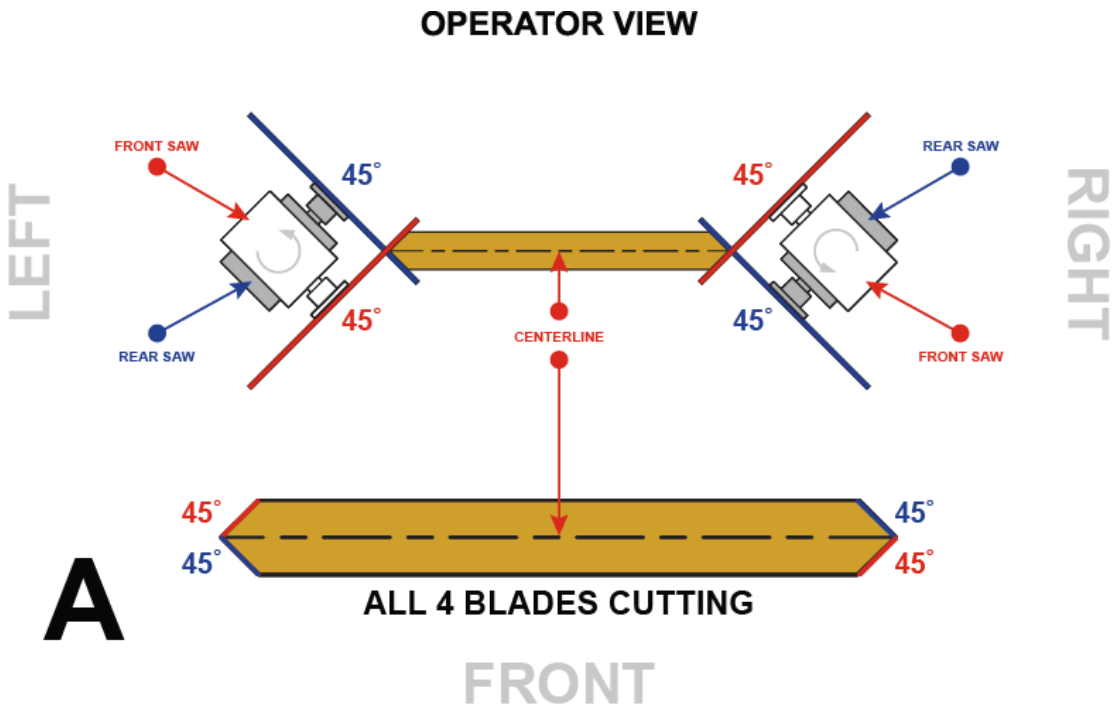
Turn the cut-off saw **hand wheel CLOCKWISE** to move the saw closer. To reduce the length of the cut board.

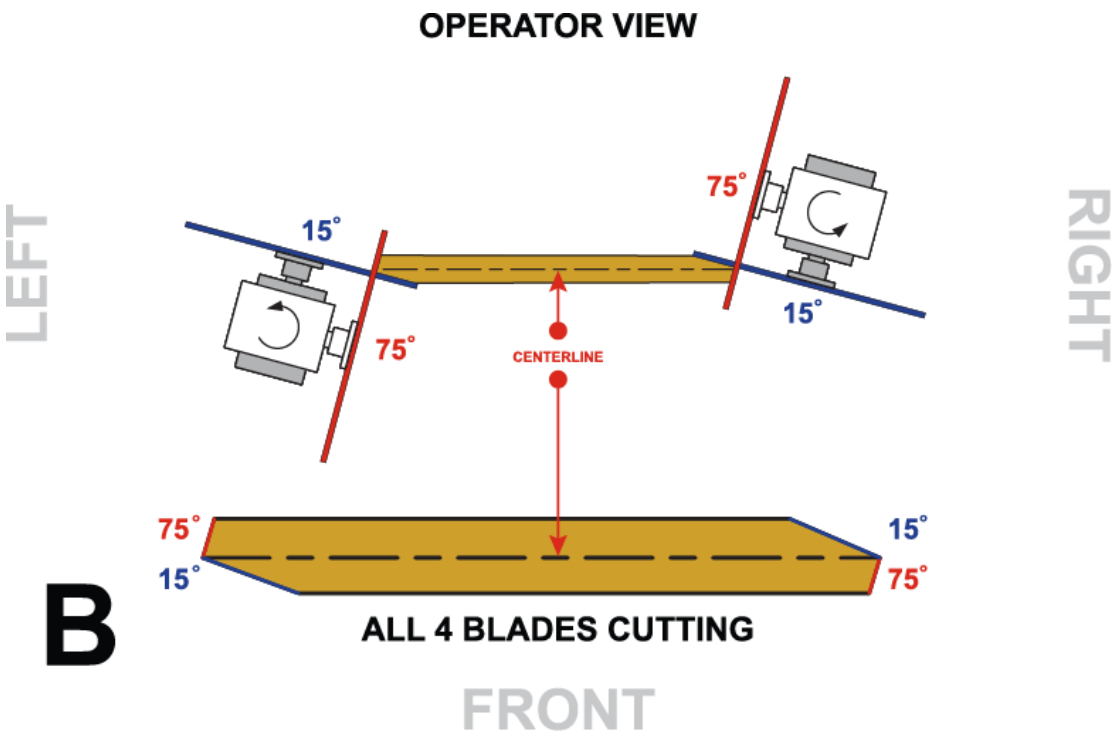
Turn the cut-off saw hand wheel **COUNTER-CLOCKWISE** to move the saw or farther away for a longer board cut from the lumber conveyor.

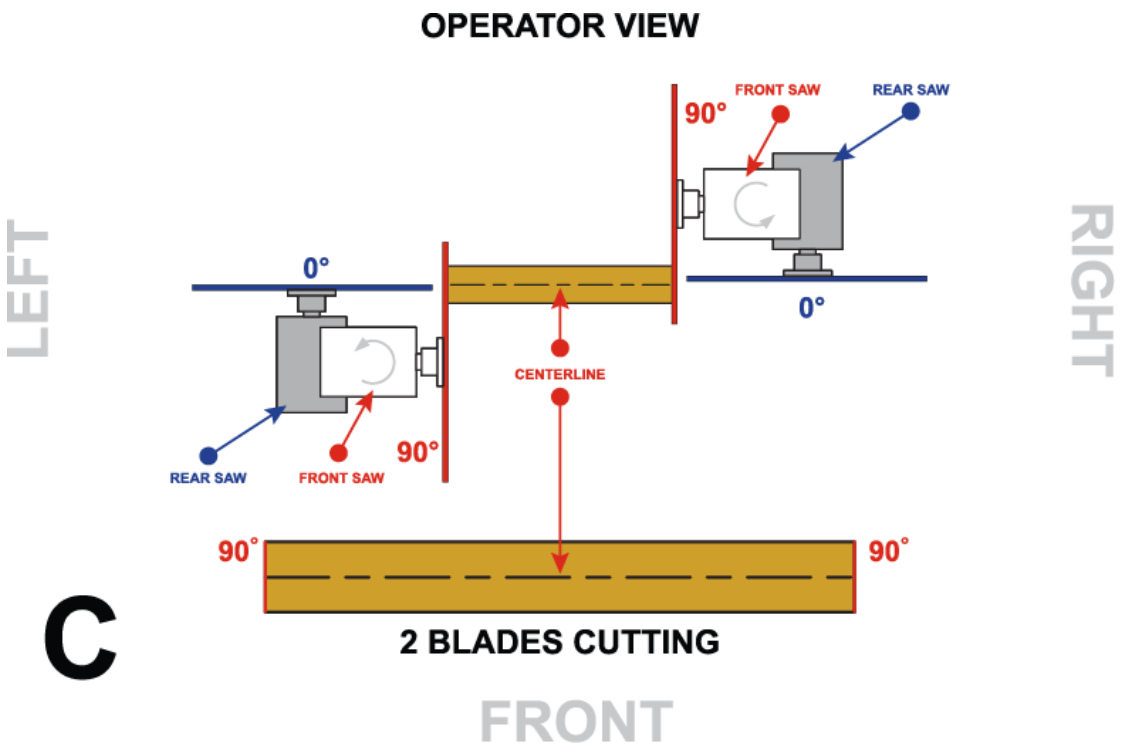


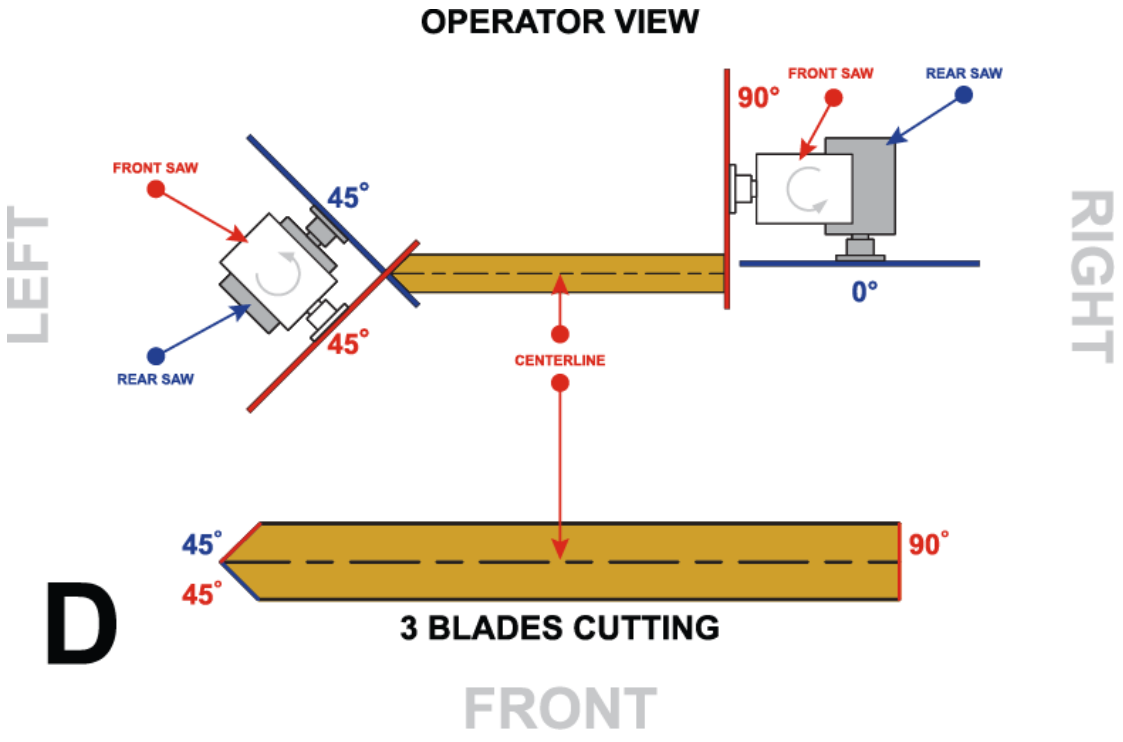
Adjust the position of the waste roller conveyor based on the width of the board being cut. Manually slide the roller conveyor to the proper position. The image above shows the farthest right position.

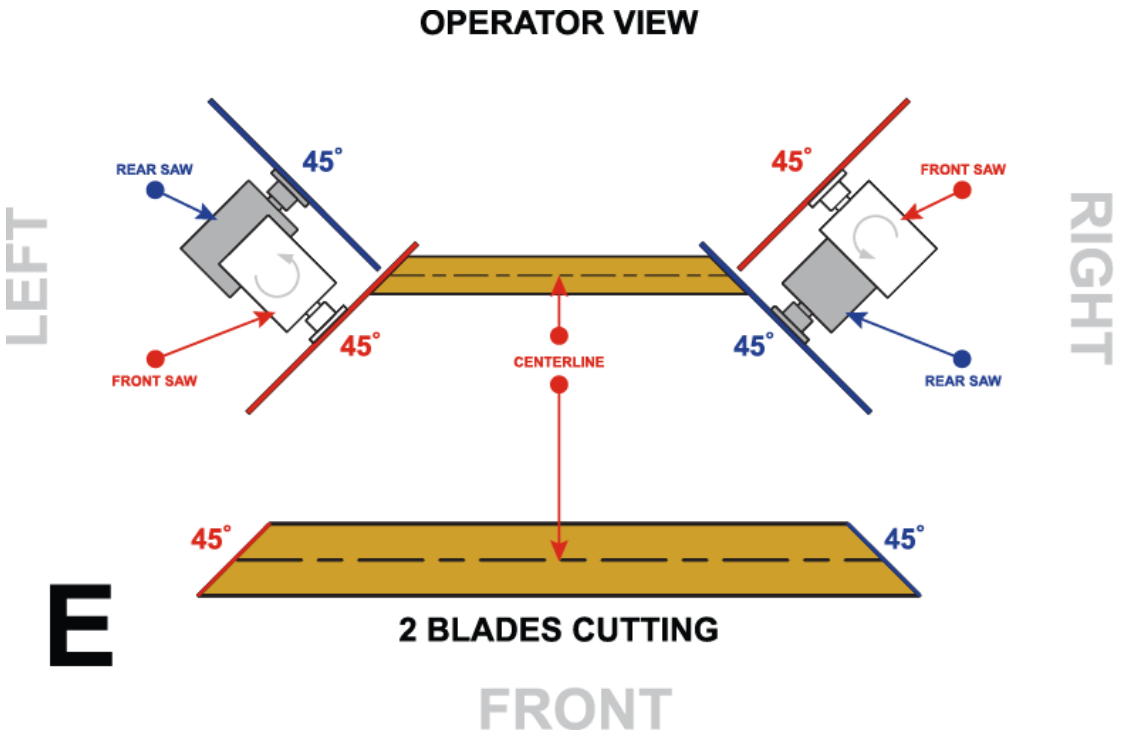
Floor Web Saw Cuts Examples






OPERATOR VIEW
FRONT SAW
REAR SAW
90°
0°
0°
CENTERLINE
REAR SAW
FRONT SAW
90°
90°
90°
LEFT
RIGHT
C
2 BLADES CUTTING
FRONT


OPERATOR VIEW
FRONT SAW
REAR SAW
90°
FRONT SAW
45°
0°
45°
REAR SAW
CENTERLINE
45°
45°
90°
LEFT
RIGHT
D
3 BLADES CUTTING
FRONT


OPERATOR VIEW
LEFT
RIGHT
REAR SAW
FRONT SAW
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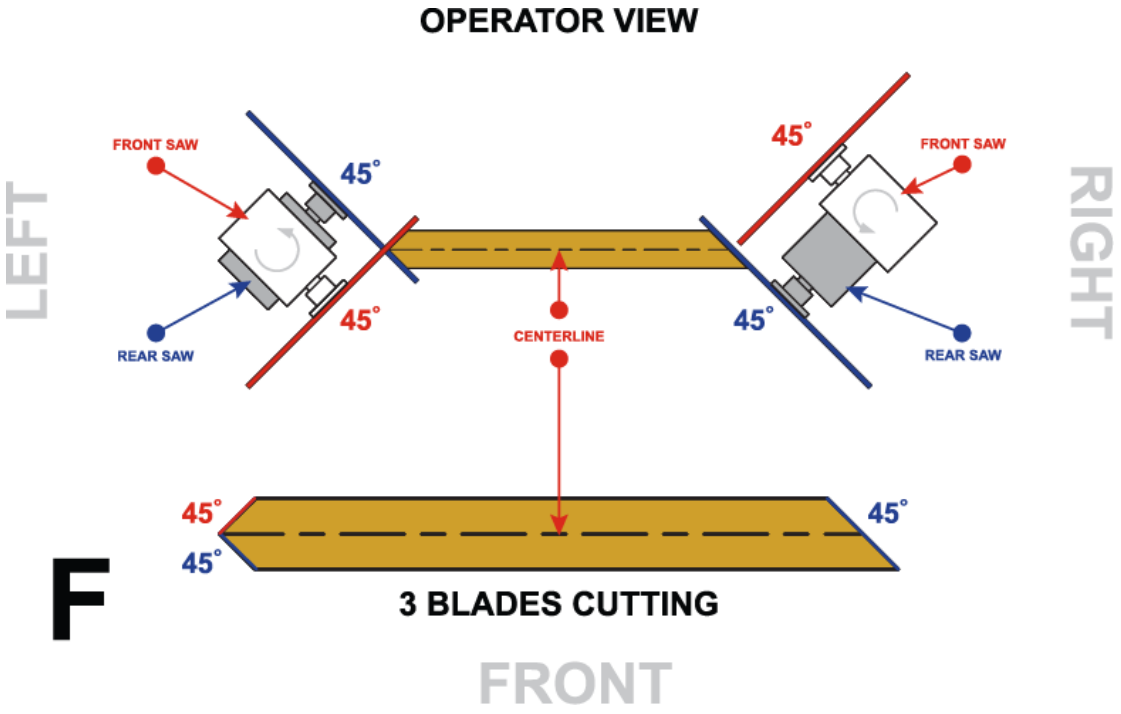
E
2 BLADES CUTTING
FRONT

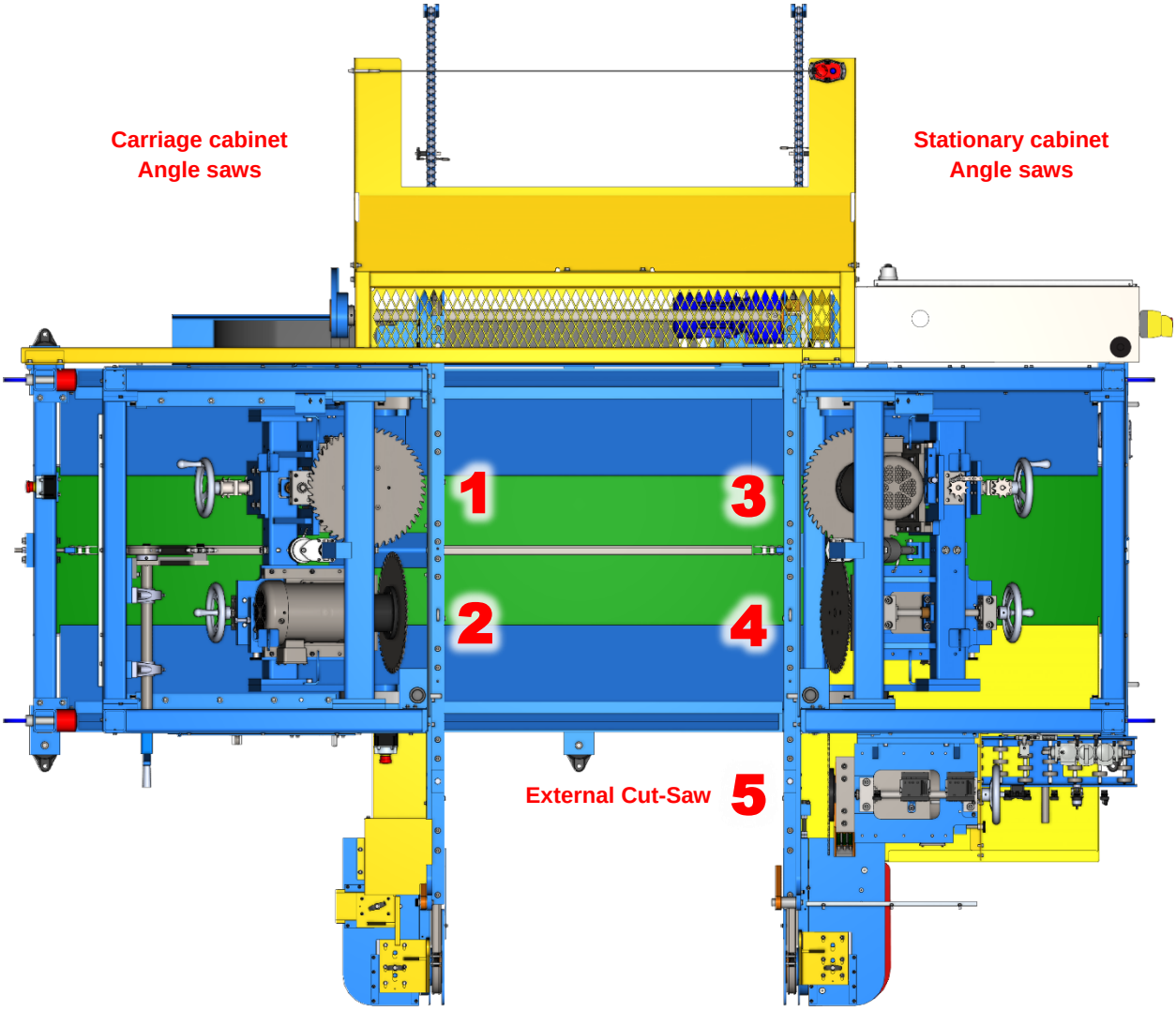

OPERATOR VIEW
LEFT
RIGHT
FRONT SAW
REAR SAW
45°
45°
45°
45°
CENTERLINE
FRONT SAW
REAR SAW
45°
45°
F
3 BLADES CUTTING
FRONT

	⚠ WARNING
	Keep saw blades sharp and in good condition. Have the saw blade re-tipped if carbide tips become chipped or come off. Dull blades cause high kickback forces which can cause injury.

	⚠ WARNING
	ELECTROCUTION, CRUSH, CUT, and HIGH-PRESSURE HAZARDS Perform the safety tests described in the *Safety Tests* section before operating the equipment at the initial startup, after performing any maintenance, and in accordance with the maintenance schedule.

	⚠ WARNING
 	ELECTROCUTION AND HIGH PRESSURE HAZARDS. Always turn the power off and activate an E-stop when the equipment is not in operation. Always verify that all power to the machine has been turned off and follow approved lockout/tagout safety procedures (OSHA 29 CFR 1910.147) before performing any maintenance on this equipment. Turn off the air switch or shutoff valve if appropriate. Bleed pneumatic and hydraulic lines if appropriate.

Saw Heads and Motors Placement

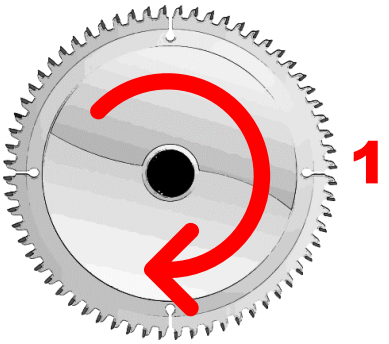


OPERATORS SIDE

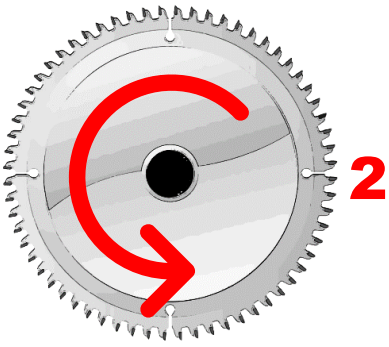
Correct Direction of Saw Blade Teeth

Correct tooth direction is achieved when the tooth at the top of the blade looking from the operator's side of the machine is facing the operator. The location and recommended size of each saw blade is shown below. Note the direction of the teeth in relation to the operator's side.

ADJUSTABLE CABINET ANGLE SAWS

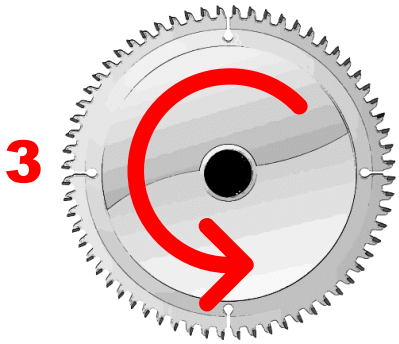


CLOCKWISE

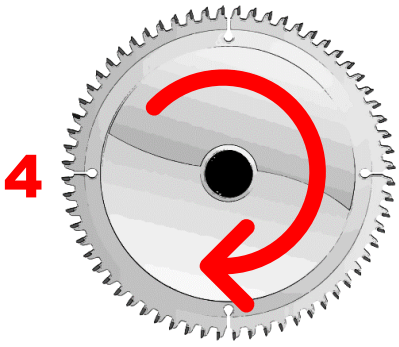


COUNTERCLOCKWISE

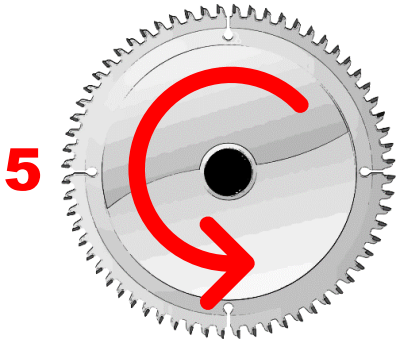
STATIONARY CABINET ANGLE SAWS



COUNTERCLOCKWISE



CLOCKWISE



COUNTERCLOCKWISE
EXTERNAL CUT-SAW

IMPORTANT: The view for the Cut-Off saw. Is the view from the conveyor side of the saw, with the blade at 90^0.

Recommended Minimum Schedule for Replacing Blades

Every shift the operator should perform the following tasks to check the saw blade for signs of wear and replace or repair accordingly:

		80 – HOUR WORK WEEK
Every 2 weeks	---	Blades 1 - 4
Every month	Blades 1 - 4	Blades 5
Every 2 months	Blades 5	---

- Check blade diameter.
- The saw blade must be removed and discarded if it's less than 15-5/8" (14.375).
- Check for cracks, warping, missing or dull teeth, etc.
- Observe the blade during operation for wobble or vibration.
- Check that the bolts holding the blade to the hub are secure.

The frequency of blade changes and repairs depends on the amount of use and the species and grade of lumber that is cut. Certain blades will wear faster than others because of their location relative to the incoming lumber.

Your plant may need to change the blades more often for optimum saw operation.

Remove Wax Coating from Blade

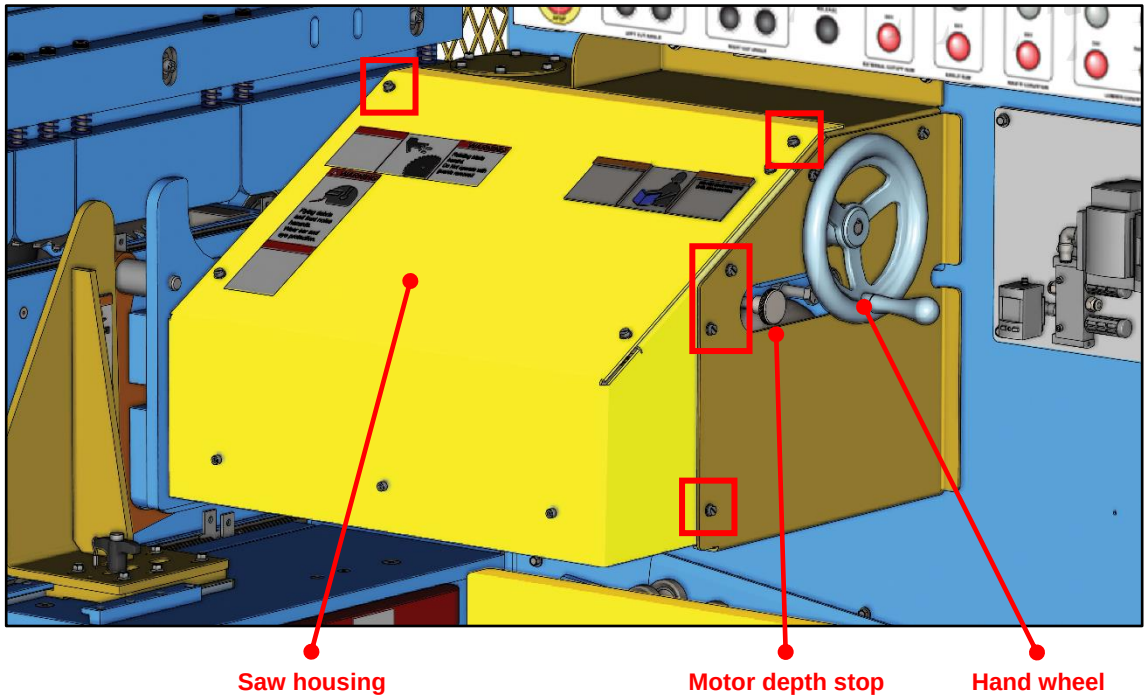
Some blades have a wax coating over the teeth to make them easier to handle and to protect the teeth from breakage during shipping. Remove this coating before installing the new blade.

Replace Angle Cut-Saw Blade

First, unlock the access doors to the cutting cabinet to change the Angle Cut-Saw blades. See **UNLOCK ACCESS DOORS** in the Operation Section.

1. Power off the machine.
2. Open the access door. Use the **DOOR UNLOCK** button to open the two **ACCESS DOORS**.
3. **LOCKOUT/TAGOUT**
4. Turn the hand wheel of the saw that needs its blade replaced to move it as far back (closest to the **ACCESS DOORS**) as possible.
5. Use a hex wrench to remove the three bolts that attach the blade to the hub.
6. Remove the blade.
7. Blow off dust from the hub and the bolt threads. Remove all pitch and debris from threads.
8. Wipe down the mounting surface on the new saw blade and the hub. Use a 320-grit emery cloth, if necessary, to remove pitch.
9. Ensure all parts are clean, dry, and free of lubricants.
10. If using a used saw blade, measure its diameter from outside edge of tooth to outside edge of tooth. If the diameter is less than 15-5/8", discard it.
11. Install a new blade. Ensure the teeth are facing the correct direction.
12. Replace the bolts. Use a torque wrench fitted with a hex bit and **tighten the bolts to 18-20 ft-lb torque**.
13. Turn the hand wheel to return the saw to its prior position.
14. Close the access door and restore power to the machine.

Replace External Cut-Off Saw Blade



1. Power off the machine.
2. Remove Cut-saw yellow saw housing.
3. **LOCKOUT/TAGOUT.**
4. Use the hand wheel to move the saw blade as close to the back as possible.
5. Remove the **Two Bolts** located under the operator control panel (**Red Boxes In figure above**).
6. Remove the **three Bolts** from the side of the housing (**Red Boxes In figure above**).
7. With the wheel and all bolts removed, pull the yellow housing away from the machine to access the saw.
8. Use a hex wrench to remove the three bolts that attach the blade to the hub.
9. Remove the blade.
10. Blow off dust from the hub and the bolt threads. Remove all pitch and debris from threads.
11. Wipe down the mounting surface on the new saw blade and the hub. Use a 320-grit emery cloth, if necessary, to remove pitch.
12. Ensure all parts are clean, dry, and free of lubricants.

13. If using a used saw blade, measure its diameter from outside edge of tooth to outside edge of tooth. If the diameter is less than 15-5/8", discard it.
14. Install a new blade. Ensure the teeth are facing the correct direction. Replace the bolts. Use a torque wrench fitted with a hex bit, **tighten the bolts to 18 – 20FT.lbs torque**. **Tighten Saw Blade Bolts in This order.**
15. Replace External Cut-saw saw housing.
16. Use the hand wheel to move the saw blade back into position.

Maintaining Your Machine

- Ensure that all people, tools, and foreign objects are clear of the restricted zones before operating this equipment. The restricted zone is shown on page 42.
- Perform safety tests to ensure all E-stops are working properly before operating the equipment at the initial startup, after performing any maintenance, and in accordance with the maintenance schedule.
- Always push an E-stop button before approaching a machine for any reason. An E-stop may cause components to move without warning.
- Only use procedures described in this manual. Any other procedures should be discussed with MiTek to verify it is done safely. For topics not covered in this manual or online, contact MiTek for advice.
- In case of machine malfunction, stop the machine immediately using an E-stop, lockout/tagout, and report the malfunction to a supervisor.
- Never leave the machine running unattended. Turn the power off! Do not leave the machine until all parts have come to a complete stop and all electrical power has been shut off. If an equipment manual specifies a machine is designed for automated use, ensure safety devices prevent unauthorized entry before moving away from the machine.
- Check for worn or damaged parts regularly. Repair or replace them immediately.
- Only use the exact replacement parts specified. Using unapproved parts may void the warranty and can be a safety risk.
- Keep the hydraulic, pneumatic, and electrical systems in good working order at all times. Repair leaks and loose connections immediately. Never exceed the recommended pressure or electrical power.
- Check that all guards and safety devices are in place and in working order before each shift starts. All protective guards and safety devices must be in place before and during use of the machine. Never disconnect or bypass any safety device or electrical interlock.

- Torque bolts and fasteners to the specifications given by MiTek. If no torque specification is given, use industry standards.
- Only qualified maintenance personnel shall make adjustments or remove, repair, or install safety devices. Only qualified electricians should perform electrical work.
- Periodically inspect the quality of the finished product.
- Document all preventive and repair maintenance over the life of the machine to improve machine efficiency and reduce the risk of accidents.

	⚠ CAUTION
	CRUSH AND CUT HAZARD Always replace guards after completing maintenance and before removing the lockout/tagout device. Operating a machine with guards removed may result in serious injury or death.

	⚠ WARNING
	Lockout/tagout before performing any maintenance! If power is required, ensure all personnel are clear.

	NOTICE
	Never use compressed air inside an electrical enclosure. It may force contaminants into electrical connections. Use a vacuum to remove dust from electrical enclosures. Canned air is acceptable after vacuuming.

Cleaning

Cleaning Saw Dust and Debris

It is important to blow off and vacuum the equipment daily. Saw dust acts as an insulator and will prevent electrical components from working properly, and debris causes mechanical jams. Refer to your equipment manual for weekly, quarterly, monthly, and other periodical maintenance.

Blow Off

- Top and sides of saw frame
- Auto Deck chains
- Infeed rail where board travels
- Outfeed, lumber channel

- Remove lumber scraps and anything that doesn't belong on equipment surfaces, belts, and blow off surfaces.

Vacuum

- Inside electrical enclosures: **NEVER USE COMPRESSED AIR!**
- Saw motors.
- Inside saw chamber, especially around blades and motor.
- Inside cabinets.

Daily Inspections

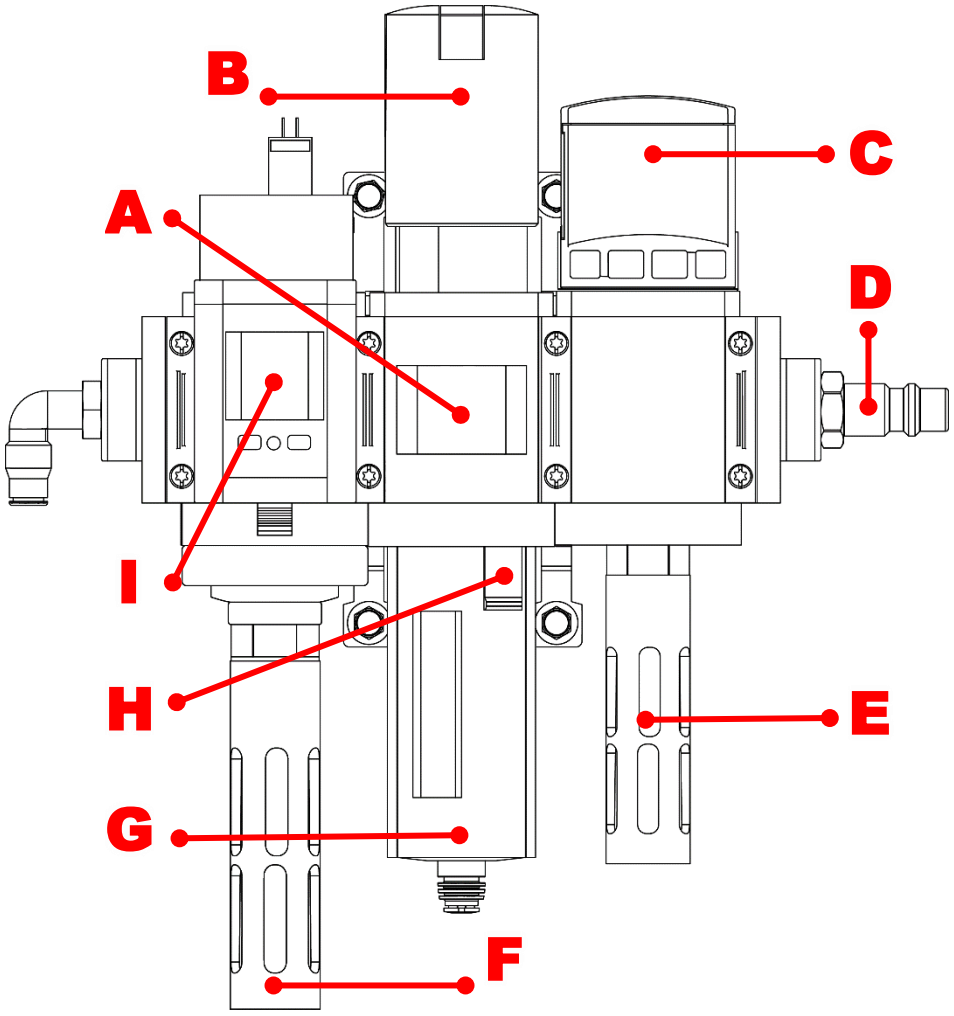
- Check that the pneumatic system pressure is 100 psi.
- Check for water in the pneumatic system filter and drain.
- Check E-stops for proper operation.
- Check saw blade braking time on the front cut-off saw. There is only one brake.
- Check that all guards are in place and secure.
- Perform calibration check.
- Check saw blades for chipped or missing teeth, dullness, pitch build-up, and warping.
- Inspect the saw for damage and loose or missing parts.

Every 2 Hours Clean and Lubricate All Parts Listed

- Blow off, clean, and/or lubricate the following components.
- Slides, castings, and motors.
- Chains and sprockets.
- Infeed conveyor, including rack and pinions.
- Waste conveyors.
- Hold-downs.
- Carriage and carriage tracks.

	⚠ WARNING
	**ELECTROCUTION, HIGH PRESSURE, CRUSH, CUT, AND CHEMICAL HAZARDS** **Read this section AND the safety section in the preliminary pages before operating or maintaining this equipment.** **Do not operate this machine until you have a thorough understanding of all controls, safety devices, E-stops, and operating procedures outlined in this manual.** **Read and observe all hazard instructions. Failure to do so may result in economic loss, property damage, and/or personal injury.** **This manual must always be available to personnel operating and maintaining this equipment.**

Main Filter / Regulator



A – Pressure gauge, B – Pneumatic Filter/Regulator Knob, C – Shut Off Valve W/Muffler, D – FTG, ¾ NPT Barb, E – Muffler, F – Muffler, G – Bowl Module, H – Blue Tab, I – Sensor switch.

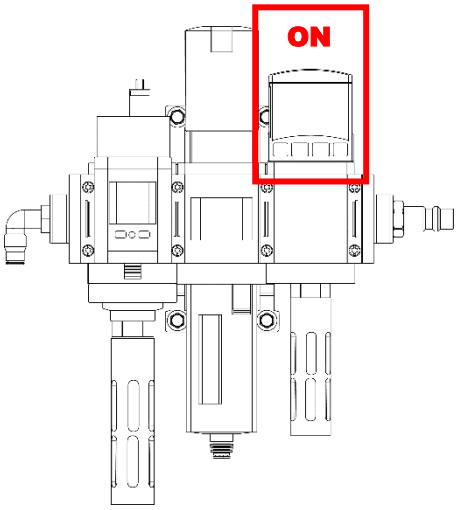
There is only one **Pneumatic Filter/Regulator** on the **Floor Web Saw**. The main **Pneumatic Filter/Regulator** manages incoming air from the air source, keeping it at the pressure needed for the most robust pneumatic component in the **Floor Web Saw** system.

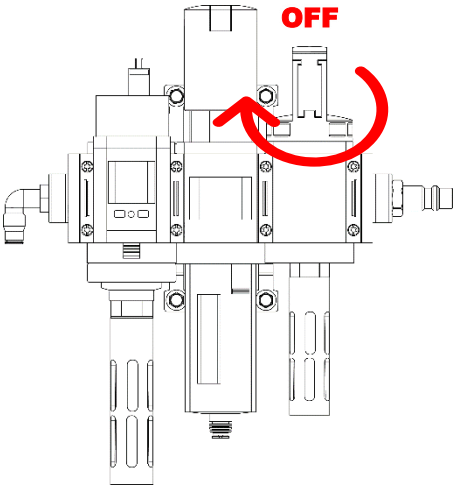
It's the only **Floor Web Saw Filter/Regulator** that needs to be connected to an air source. Some parts have their own filter/regulator to reduce the pressure further. **The range of pressure the Floor Web Saw can handle is 100 + or - 20 PSI.**

Releasing Pressure

Bleeding pressure from pneumatic lines poses a high-pressure health hazard. To remove pressure from the system, use the following procedure.

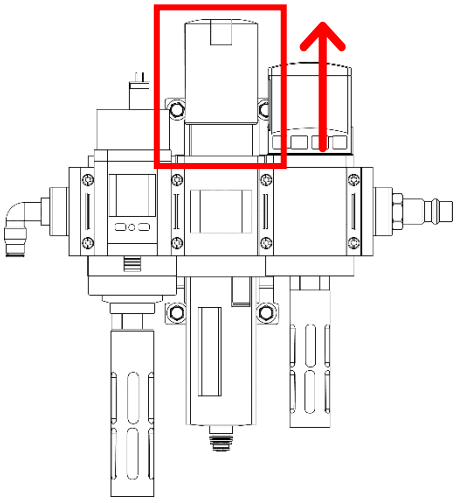
First, **turn the shut off valve clockwise** to the off position. The air pressure will automatically be released from the air lines.





	⚠ CAUTION
	HIGH PRESSURE HAZARD. Bleed all pressure from pneumatic lines before performing maintenance on pneumatic components. Pressurized components may move suddenly or vent air to atmosphere, causing injury.

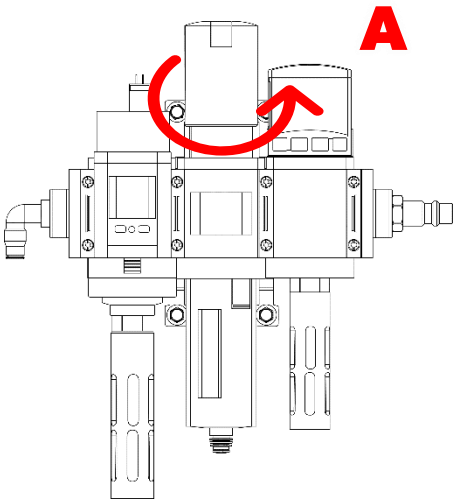
Adjusting the Operating Pressure

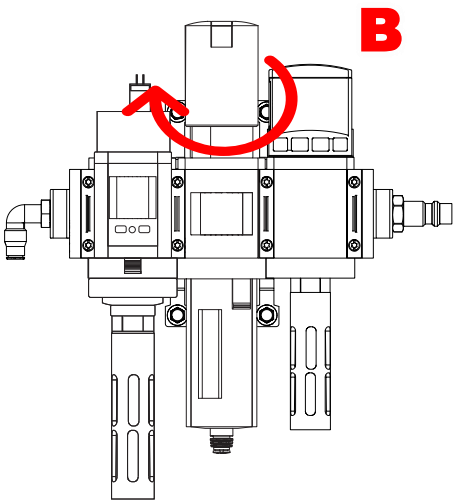


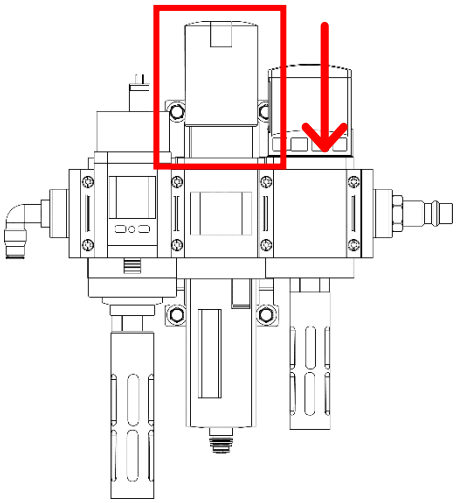
Pull up on the **Pneumatic Filter/Regulator Knob** to unlock the adjustment knob until you hear or feel a click.

A - Turning clockwise increases the pressure.

B - Turning counterclockwise decreases the pressure.



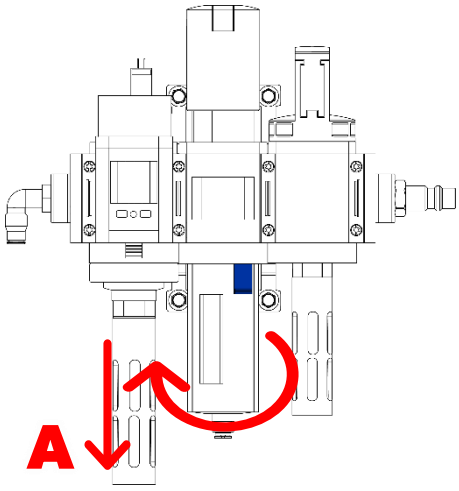




Once the gauge reads **100 psi**, push the knob down to lock it into place. **The range of pressure the Floor Web Saw can handle is 100 + or -, 20 PSI.**

Replacing the Filter Element on the Filter / Regulator

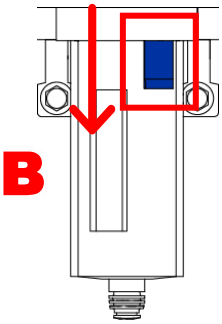
The regulator uses a filter that must be replaced every 6 months. This filter can be purchased through MiTek. Refer to the Ordering Parts on page 30 for instructions on ordering parts. Use the following procedure to replace a filter element.

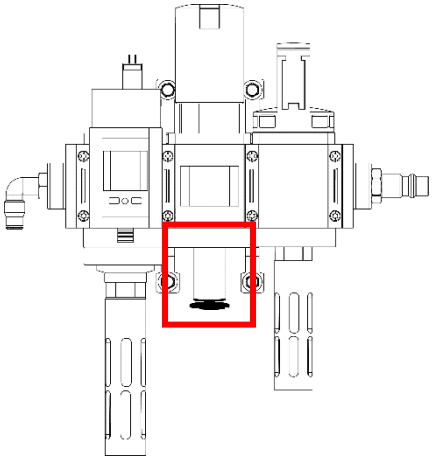


Remove pressure from the lines by using the procedure in Removing Pressure from the Pneumatic System on page 81.

To remove the bowl (**A**) from the regulator.

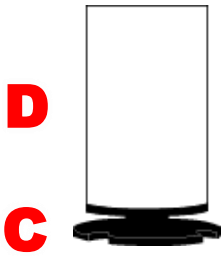
Pull downward on the blue tab (**B**) on the bowl and twist. **The blue tab may be located on the back of the regulator bowl.**

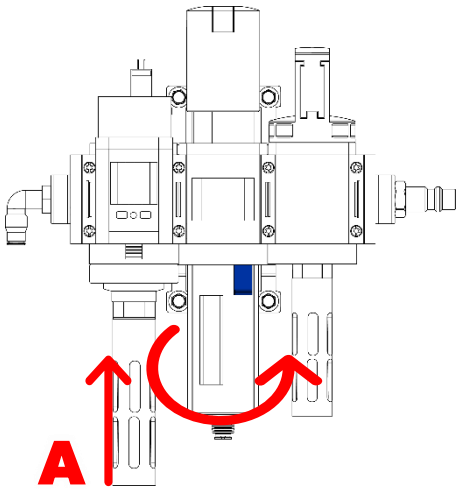




Unscrew the plastic baffle (**C**) holding the filter element (**D**) and remove it from the regulator.

Replace the filter element (**D**). Screw the black plastic baffle (**C**) back into place.





Place the bowl back onto the regulator body by pushing up and turning.

Make sure bowl is secure and the blue tab is in the locked position before returning pressure to the lines.

Lubricating

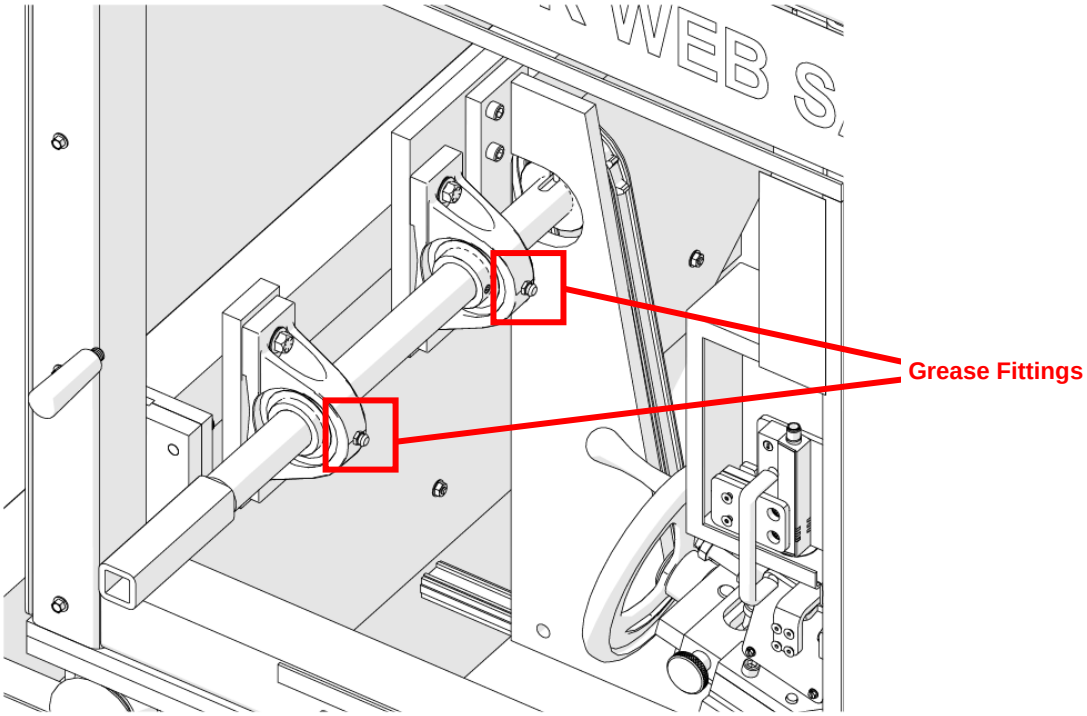
Lubrication of various items is required to keep the machine operating properly and to prevent Y costly replacements. See the respective mechanical sections for further instructions on lubrication.

Using a Manual Grease Gun

This manual frequently refers to various items (such as bearings) that require the use of a manual grease gun for proper lubrication. The amount of lubrication that should be applied is typically measured in cm^3.

The amount of lubricant output by a manual grease gun per stroke can vary among models. We highly recommend customers familiarize themselves with the amount of grease output per stroke with any grease gun to avoid applying too much lubricant and potentially causing damage to the machine.

Grease fittings are only found in the carriage cabinet.



NOTICE

Before changing the saw blade angle, ensure that the motors are in the mid stop or back stop position. Failure to do so may result in the saw blades contacting the cabinet while in motion, potentially causing equipment damage.

Calibration

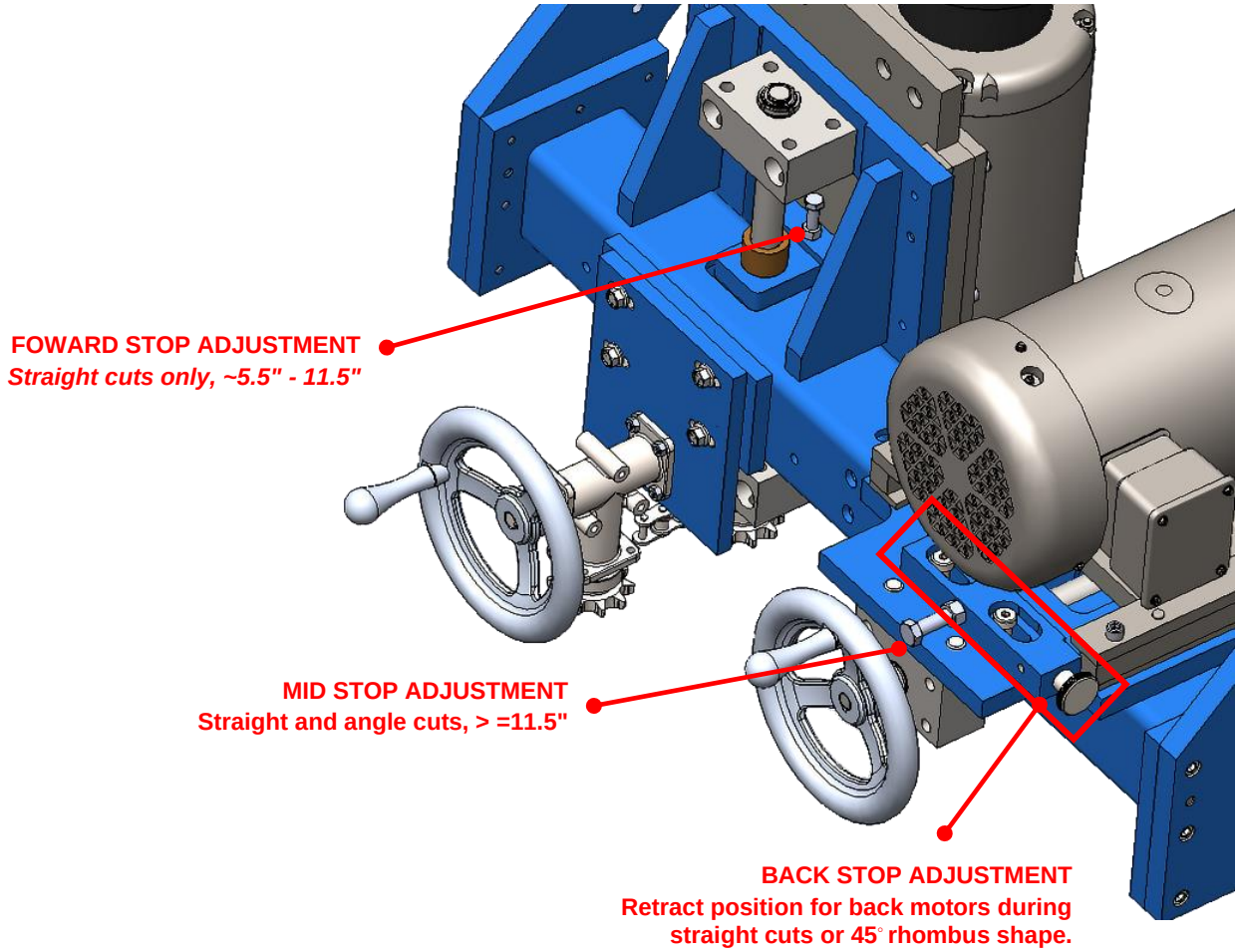
Prevent Saw Blades From Hitting the Cabinet

NOTICE

Before changing the saw blade angle, ensure that the motors are in the mid stop or back stop position. Failure to do so may result in the saw blades contacting the cabinet while in motion, potentially causing equipment damage.

7. Power the saw blades down. See page 43.
8. Wait until the saw blades come to a complete stop. This takes 7 – 8 minutes.
9. Unlock doors. See page 51.
10. Advance both the **Carriage end** and **Stationary end** motors until they bottom out on the **Mid Stop** or **Back Stop**, by turning the hand wheels in a Clockwise rotation.
11. Secure the cabinet doors closed.
12. Change the saw blades' angle. See page 62.

Forward Stop - Mid Stop - Back Stop



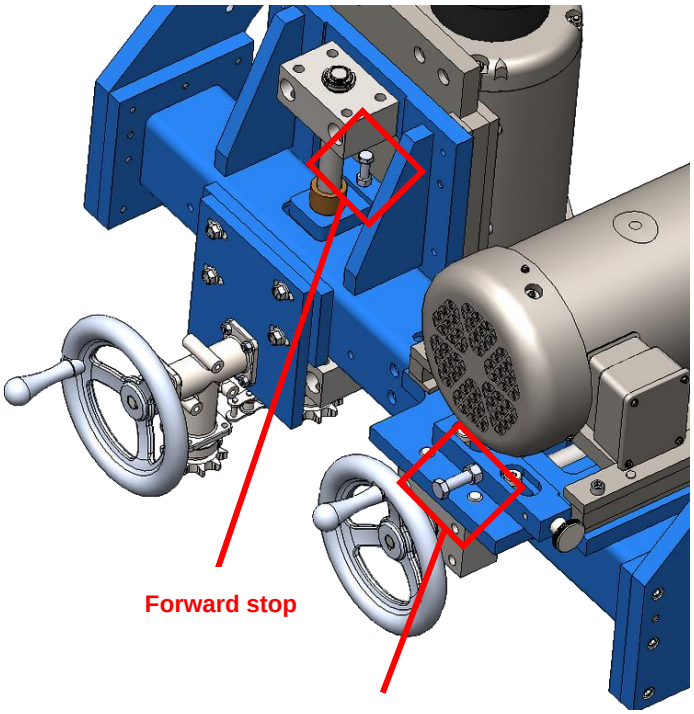
- **The forward stop** position (the hand wheel is turned to its farthest counterclockwise position) is only used for straight cuts and lengths from 11.5 inches to approximately 5.5 inches.
- **The mid stop** is used for straight and angle cuts greater than or equal to 11.5 inches.
- **The back stop** (the hand wheel is turned to its farthest clockwise position) is a retracted position for the back motors. For rhombus shape cuts, the front right and back left motors are retracted to the back stop.
- Adjust Slide Block to allow travel to Back Stop and Mid Stop positions.

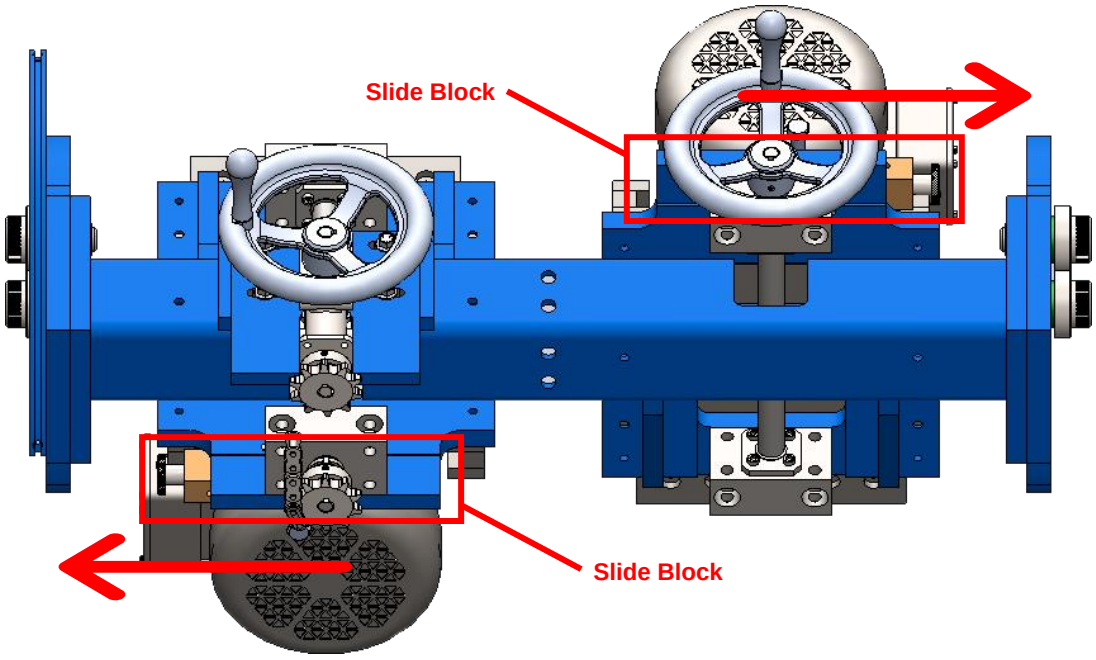
IMPORTANT: The mid stop bolt on the rear motors must be adjusted to adjust the centerline of the angle cut.

Procedure For Setting Saw Position for First Time Centerline Calibration

The following applies to first time calibration.

1. Set the distance from the bottom of the **Mid Stop Adjusting Bolt** head to the blue slide block to **1.75”**. This is the starting point for centerline calibration.
2. Make sure the **Slide Blocks** on all motors are pulled toward the outside of the machine. See graphic below.
3. Retract the motors until they hit the **Mid Stop Adjusting Bolts**. You are at position when the Slide Blocks no longer have a wiggle.

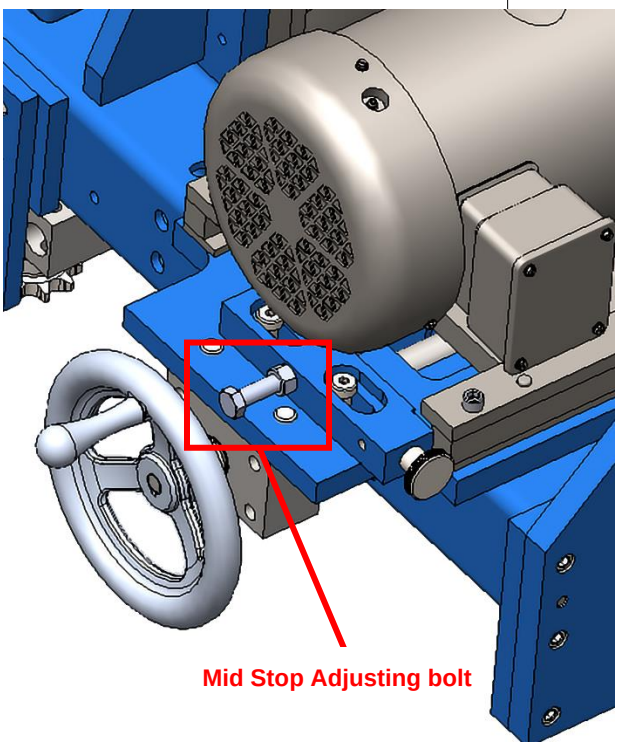




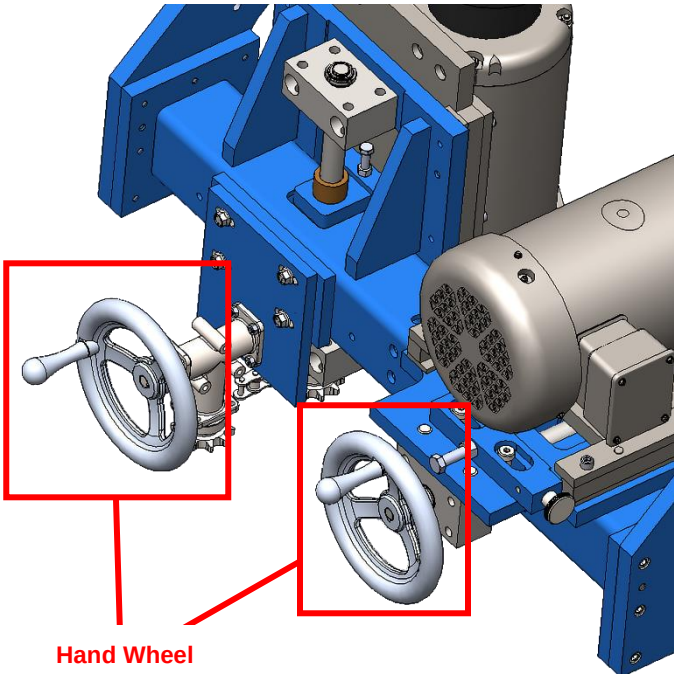
General Procedure for Setting Saw Position

The following procedure applies to any motor that needs to change position.

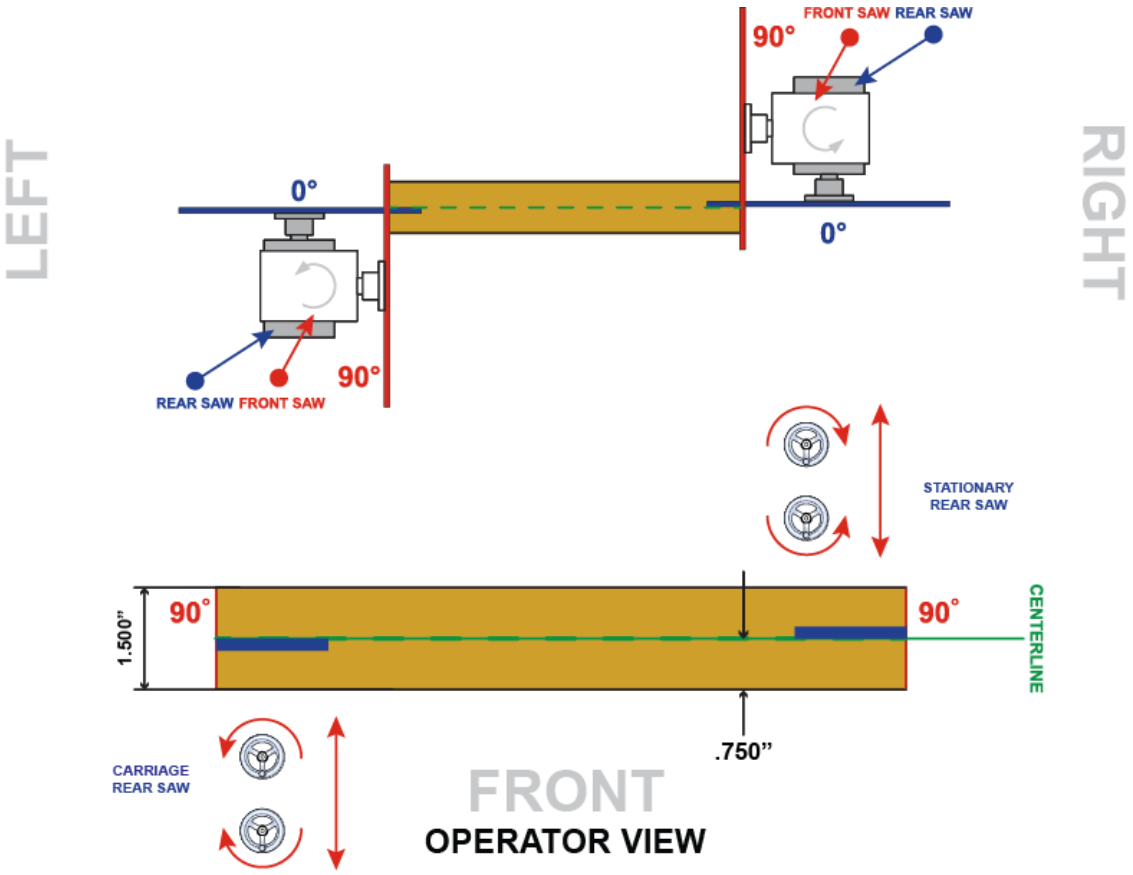
1. Identify the saw motor that needs an adjustment.
2. Loosen the lock nut and back off the **Mid stop adjustment bolt**.
3. Turn handwheel to move saw motor position. **See image and notes below.**
4. Tighten the **Mid stop adjustment bolt** until it bottoms out.
5. Tighten the **Jam nut**.



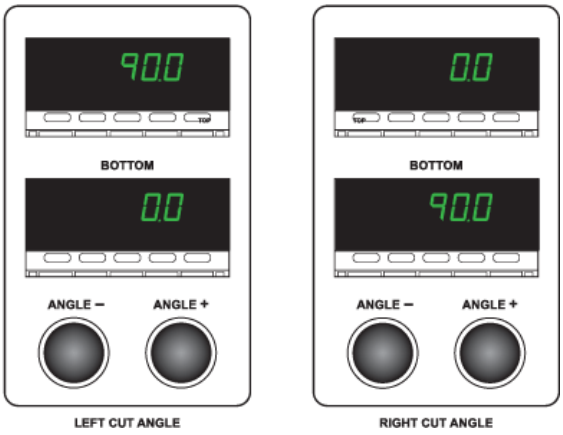
6. One rotation of the hand wheel = .100” of linear travel.
7. Counter-clockwise rotation will move the saw motor **“up”.**
8. Clockwise rotation will move the saw motor **“lower”.**



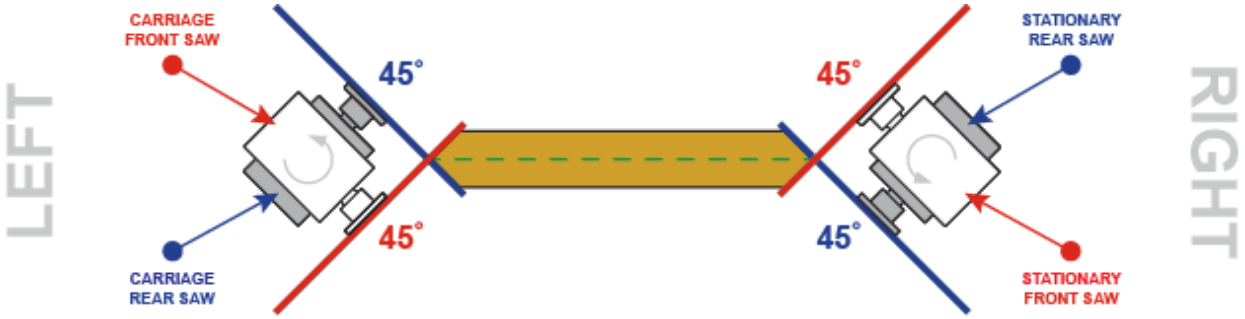
IMPORTANT: Only the Mid stop Adjustment bolt applies to centerline adjustment.

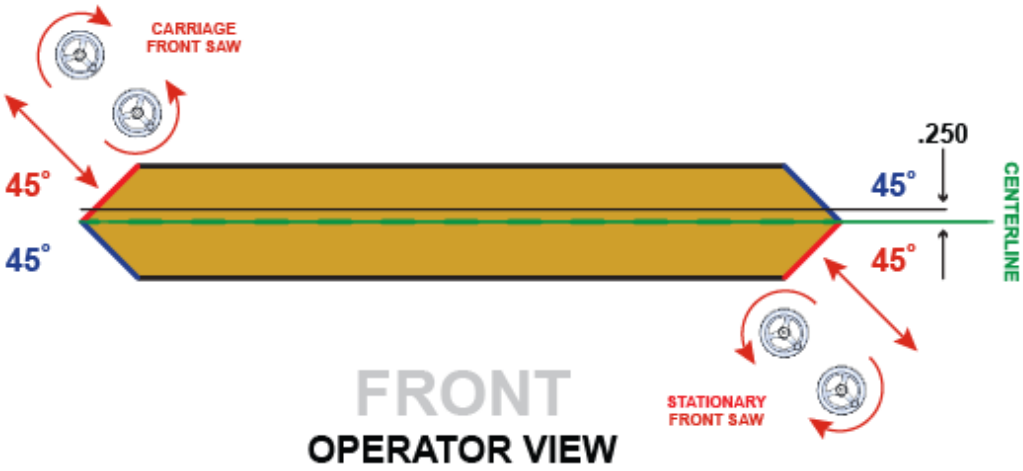


9. Move blades to the **90°/0°** orientation.
10. Mark an arrow on the top of the board indicating the direction of movement as the board travels through the saw.
11. Run one board through the machine. Board should be roughly 2' in length and as straight as possible.
12. Measure the distance from the cut to the theoretical board centerline which is **.750"** from the bottom of the board. The graphic above shows which side of centerline each cut should be on.



13. Adjust the **rear** blades according to the measured offset. **EX: .250" centerline offset = .250" blade travel = 2.5 turns of the hand wheel.**
14. Run another board and measure.
15. Repeat process if needed.

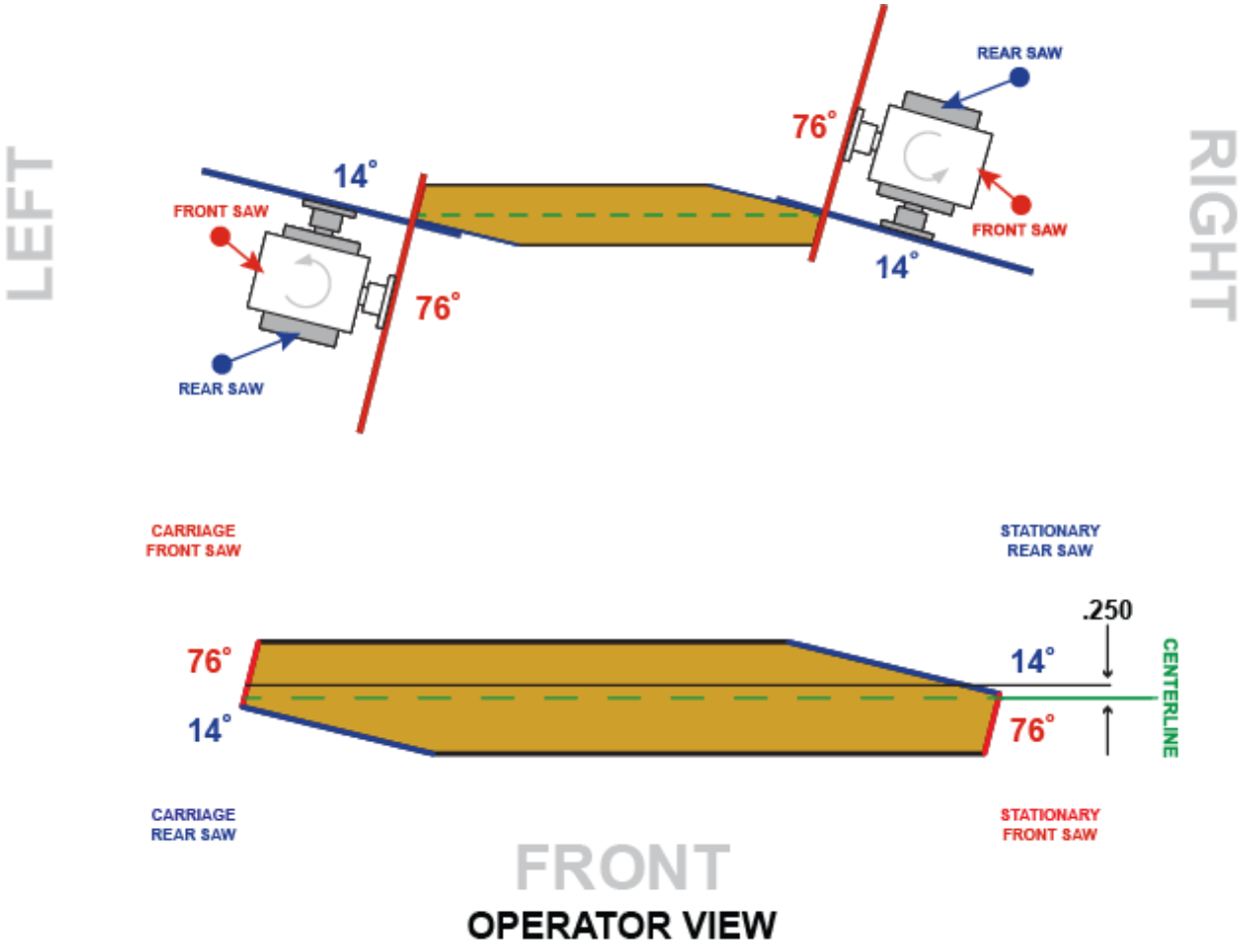




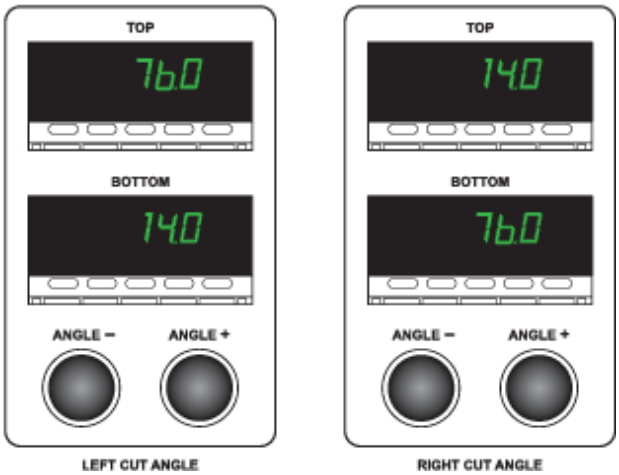
16. Move blades to the **45°/45°** orientation.
17. Run one board through the machine.
18. Measure the distance from the cut to the theoretical board centerline which is **.750”** from the bottom of the board. The graphic above shows which side of centerline each cut should be on.
19. Adjust the **front** blades according to the measured offset multiplied by **1.4**. **EX: .250” centerline offset = .350” blade travel = 3.5 turns of the hand wheel.**
20. Run another board and measure. Repeat process if needed.

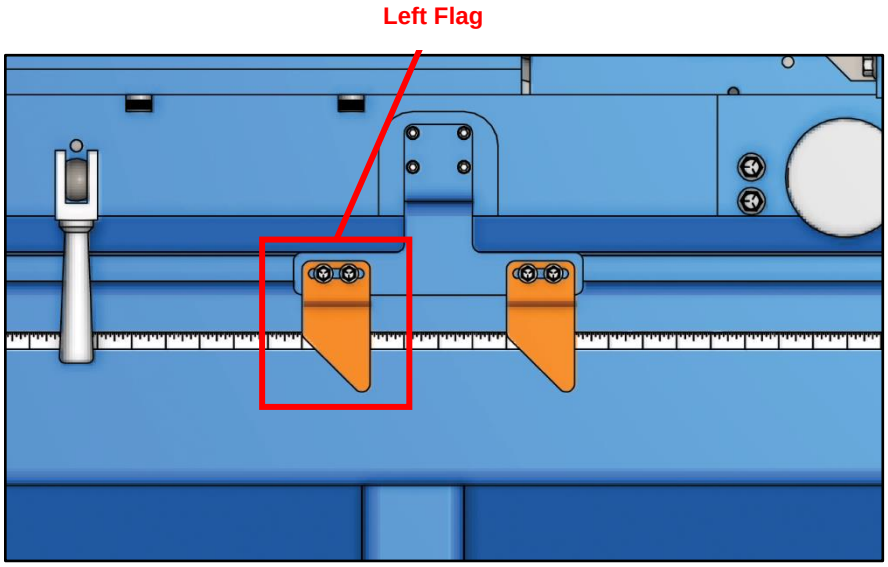
LEFT CUT ANGLE

RIGHT CUT ANGLE

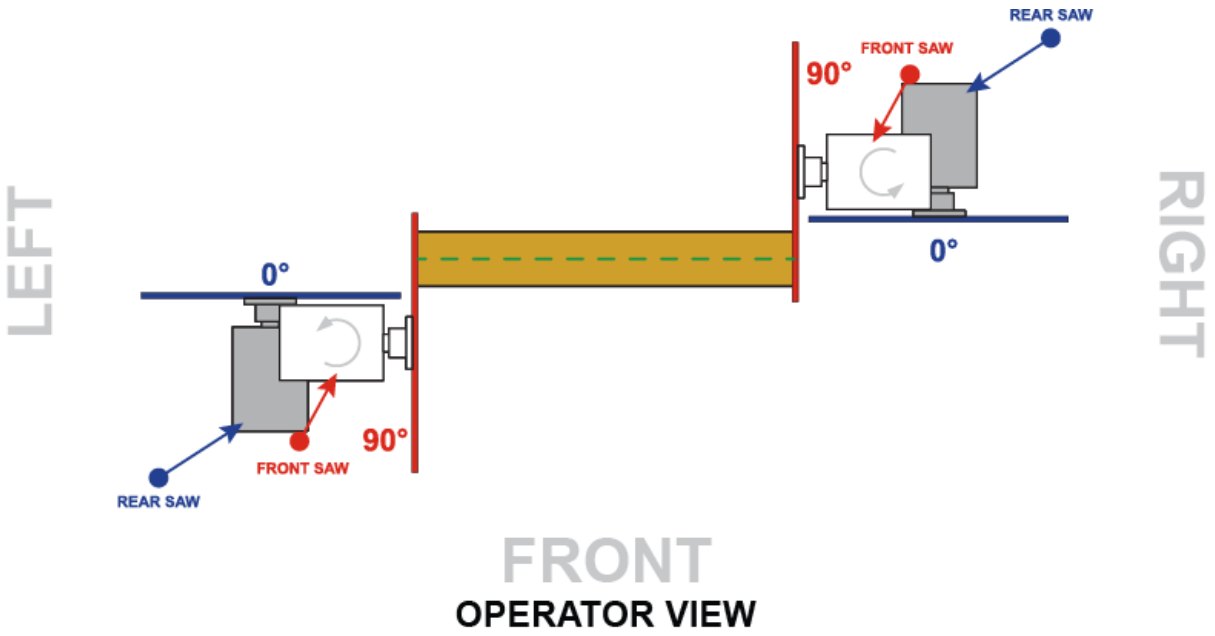


21. Move blades to the **76°/14°** orientation.
22. Run one board through the machine.
23. Compare the **76°/14°** and **45°/45°** centerlines.
24. If centerlines are more than **1/16”** off, repeat entire calibration process and pay close attention to blade orientation and measurements.

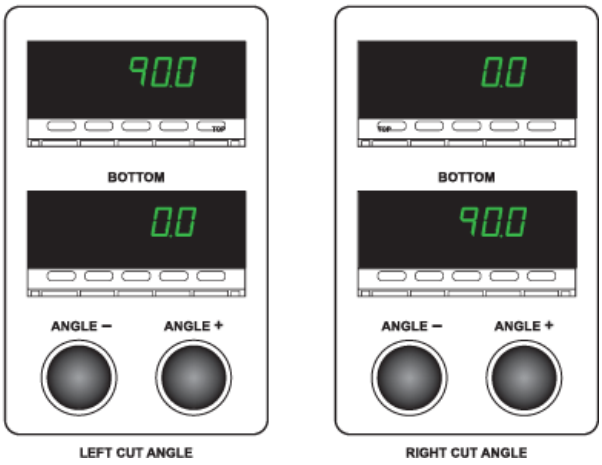


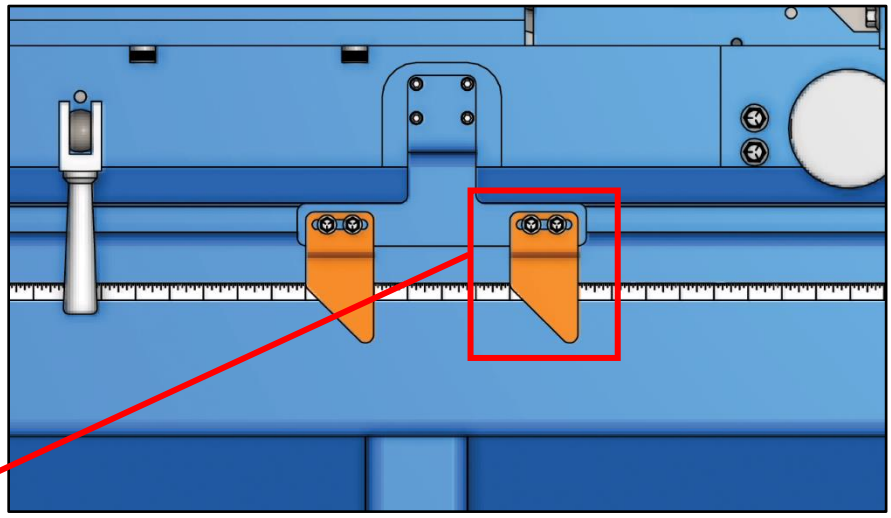


25. Measure the overall length of the **76°/14°** and **45°/45°** cuts. These should be the same.
26. Adjust the position of the measurement flag on the **left** side to match that length. This sets the length of cut for the **"standard"** position of the saw blades. This measurement is used for any four angle cuts and any cuts made with all four blades in the **"standard"** position.



27. Move blades to the **90°/0°** orientation.
28. Move both of the front (**90°**) blades to the **"forward stop"** position.
29. Move both rear blades to the "**back stop**" position at 0 degrees.
30. Run one board through the machine.
31. Measure the length of the board.
32. Adjust the position of the measurement flag on the **right** side to match that length. This sets the length for any square cut with front blades in the forward position.
33. **IMPORTANT: Be sure to adjust the saw motors back to the "standard" position before attempting to change the blade angles.**





Ordering Parts

Use the MiTek website to locate parts and part numbers, then order them using one of these methods:

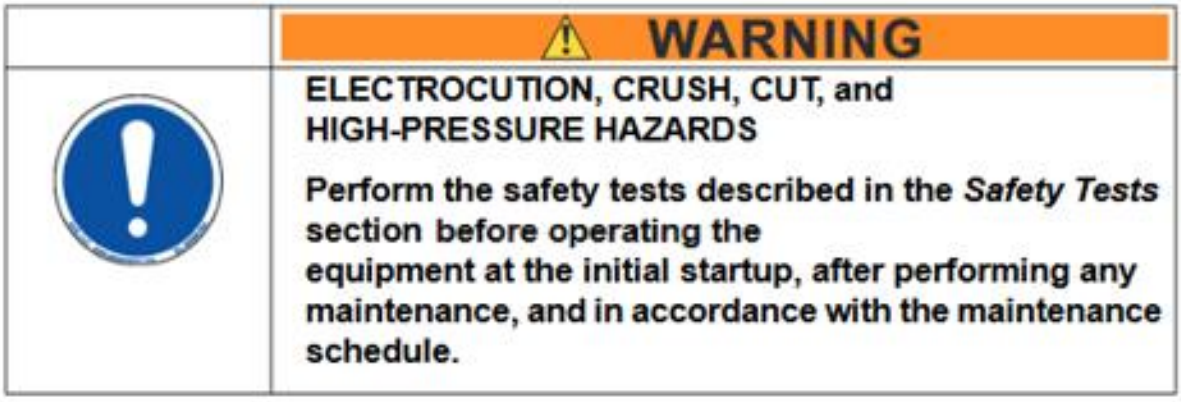
E-Mail

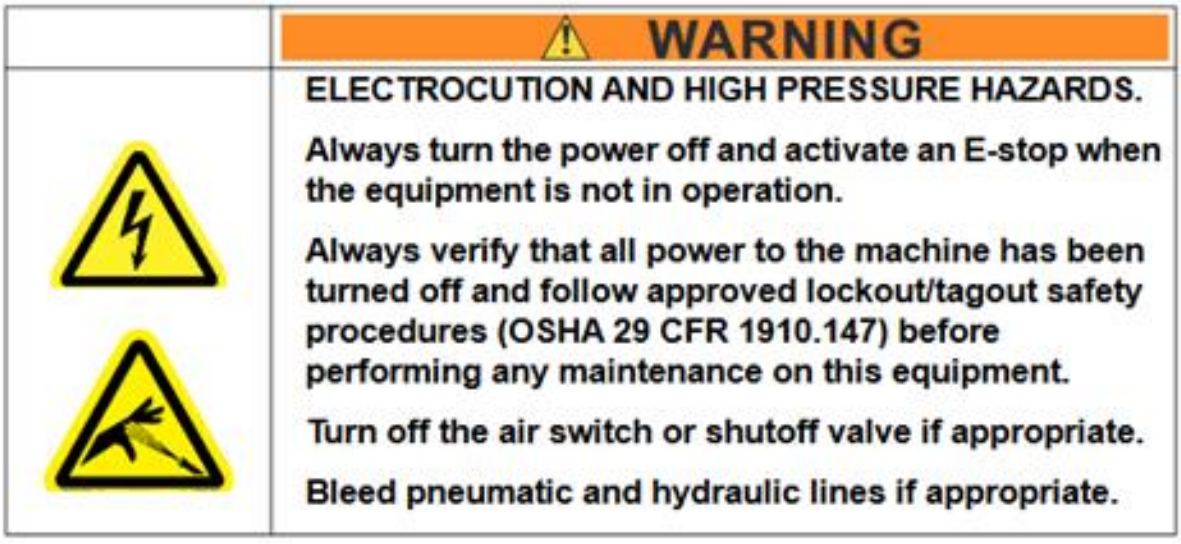
Send an e-mail to mitekparts@mii.com with all relevant information, including the part number.

Phone

1-800-523-3380

Safety Notes for Replacing Parts





Glossary

Affected Employee	A means of isolating a piece of equipment from its energy source so maintenance can safely occur; guidelines provided in OSHA 29 CFR 1910.147.
Angle	The axis that rotates the saw blade.
Amperage	The strength of an electric current is expressed in amperes.
Authorized Employee	A person who locks out or tags out a machine or equipment in order to perform servicing or maintenance on that machine or equipment; an affected employee becomes an authorized employee when that employee's duties include performing servicing or maintenance covered under this section.
Board	The saw requires a specific piece of lumber with specific dimensions to cut out specific parts.
Beacon	A light that displays one of several colors to represent the state of the machine.
Disconnect	Noun, the handle, often on a machine's main electrical enclosure, that shuts off incoming power at that spot in the electrical system.
Energized	Connected to an energy source or containing residual or stored energy.
Energy Isolating Device	A mechanical device that physically prevents the transmission or release of energy, including but not limited to the following: manually operated electrical circuit breaker; a disconnect switch; a manually operated switch by which the conductors of a circuit can be disconnected from all ungrounded supply conductors, and in addition, no circuit can be operated independently; a line valve; a block; and any similar device used to block or isolate energy—push buttons, selector switches, and other control circuit type devices are not energy isolating devices.
Energy Source	Any source of electrical, mechanical, hydraulic, pneumatic, chemical, thermal, or other energy.
Layout	A scaled diagram of the location of components and the space that they occupy.

Lockout Device	A device that utilizes a positive means such as a lock, either key or combination type, to hold an energy-isolating device in the safe position and prevent the energizing of a machine or equipment, including blank flanges and bolted slip blinds, should be standardized within the facility in at least one of the following criteria: color; shape; or size; and additionally, in the case of tagout devices, print and format shall be standardized.
Lockout/Tagout	A means of isolating a piece of equipment from its energy source so maintenance can safely occur; guidelines provided in OSHA 29 CFR 1910.147.
Lumber	A group of boards or a non-specific board; no consideration given to the final size or shape.
Part	A piece of a board, cut to the exact size and shape required for the job.
Qualified Person	A person or persons who, by possession of a recognized degree or certificate of professional training, or who, by extensive knowledge, training, or experience, has successfully demonstrated the ability to solve problems relating to the subject matter and work—ANSI B30.2-1983; one who has skills and knowledge related to the construction and operation of the electrical equipment and installations and has received safety training on the hazards involved—NEC2002 Handbook.
Regulator	A component of the pneumatic system that connects to the main air source and regulates the air pressure allowed into the system.
Tagout Device	A prominent warning device, such as a tag and a means of attachment, which can be securely fastened to an energy isolating device in accordance with an established procedure, to indicate that the energy isolating device and the equipment being controlled may not be operated until the tagout device is removed; should be standardized within the facility in at least one of the following criteria: color; shape; or size; and additionally, in the case of tagout devices, print and format shall be standardized.
Torque	A turning or twisting force.
VFD	(variable frequency drive) controls the speed of a paired motor.

Voltage	Equal to the difference of electric potential between two point on a conducting wire carrying a constant current of one ampere when the power between the points is one watt.
Waste Conveyor	A conveyor under the saw blade that transports waste lumber to a waste receptacle supplied by customer.