

# READ THIS FIRST



## MODEL SB1096 \*\*\*IMPORTANT UPDATE\*\*\*

Applies to Models Mfd. Since 08/20  
and Owner's Manual Printed 09/20



The following change was made since the owner's manual was printed:

- Steps for **Calibrating Digital Display** have been corrected.

Aside from this information, all other content in the owner's manual applies and **MUST** be read and understood for your own safety. **IMPORTANT: Keep this update with the owner's manual for future reference.**

*If you have any further questions about this manual update or the changes made to the machine, contact our Technical Support at (360) 734-1540 or email [www.southbendtools.com](http://www.southbendtools.com).*

## Revised Steps for Calibrating Digital Display

Follow **Steps 1–2** on **Page 58** of **Owner's Manual**, then proceed with the following steps.


3. Use keypad to enter measurement taken in **Step 1**, then hold Set  key until value stops flashing (see **Figure 102**).



Figure 102. Location of digital display set key.

— If in metric mode, enter value out one decimal place, adding placement zero. For example, to enter value of 45mm, enter 450. Machine will automatically enter decimal point before last digit.

— If in SAE/inch mode, enter value out three decimal places, adding placement zeros. For example, to enter a value of 1.5", enter 1500. Machine will automatically enter decimal point before last three digits.

**Note:** Machine will not accept inch value unless last digit entered is "0" or "5".

Copyright © March, 2022 by South Bend Tools

**WARNING:** No portion of this manual may be reproduced without written approval.

#CS22247 Printed in Taiwan



# 37" 15 HP 3-PHASE WIDE-BELT SANDER MODEL SB1096



## OWNER'S MANUAL

---

# South Bend Tools<sup>®</sup>

---

*A Tradition of Excellence*



# Scope of Manual

This manual helps the reader understand the machine, how to prepare it for operation, how to control it during operation, and how to keep it in good working condition. We assume the reader has a basic understanding of how to operate this type of machine, but that the reader is not familiar with the controls and adjustments of this specific model. As with all machinery of this nature, learning the nuances of operation is a process that happens through training and experience. If you are not an experienced operator of this type of machinery, read through this entire manual, then learn more from an experienced operator, schooling, or research before attempting operations. Following this advice will help you avoid serious personal injury and get the best results from your work.

## Manual Feedback

We've made every effort to be accurate when documenting this machine. However, errors sometimes happen or the machine design changes after the documentation process—so the manual may not exactly match your machine. If a difference between the manual and machine leaves you in doubt, contact our customer service for clarification.

We highly value customer feedback on our manuals. If you have a moment, please share your experience using this manual. What did you like about it? Is there anything you would change to make it better? Did it meet your expectations for clarity, professionalism, and ease-of-use?

**South Bend Tools**  
**c/o Technical Documentation Manager**  
**P.O. Box 2027**  
**Bellingham, WA 98227**  
**Email: [manuals@southbendtools.com](mailto:manuals@southbendtools.com)**

## Updates

For your convenience, any updates to this manual will be available to download free of charge through our website at:

**[www.southbendtools.com](http://www.southbendtools.com)**

## Customer Service

We stand behind our machines. If you have any service questions, parts requests or general questions about your purchase, feel free to contact us.

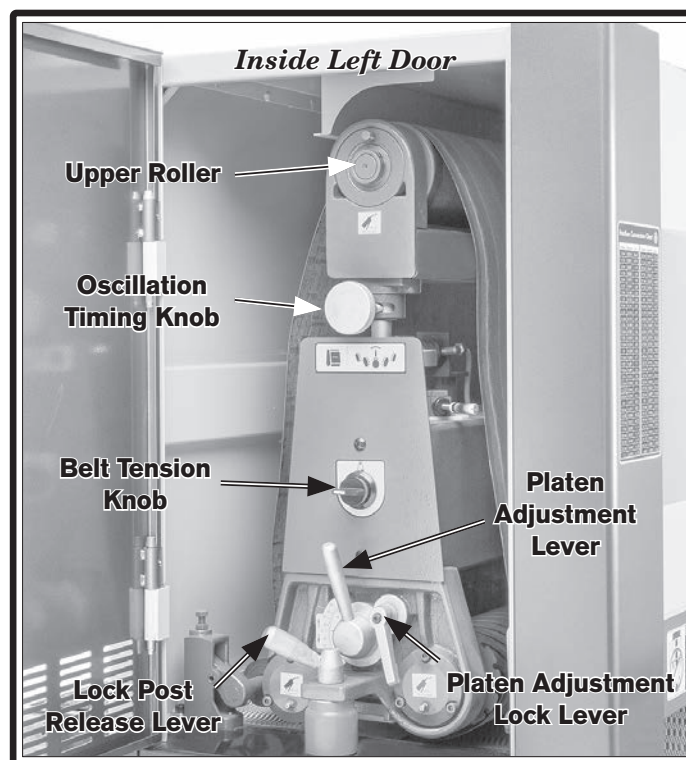
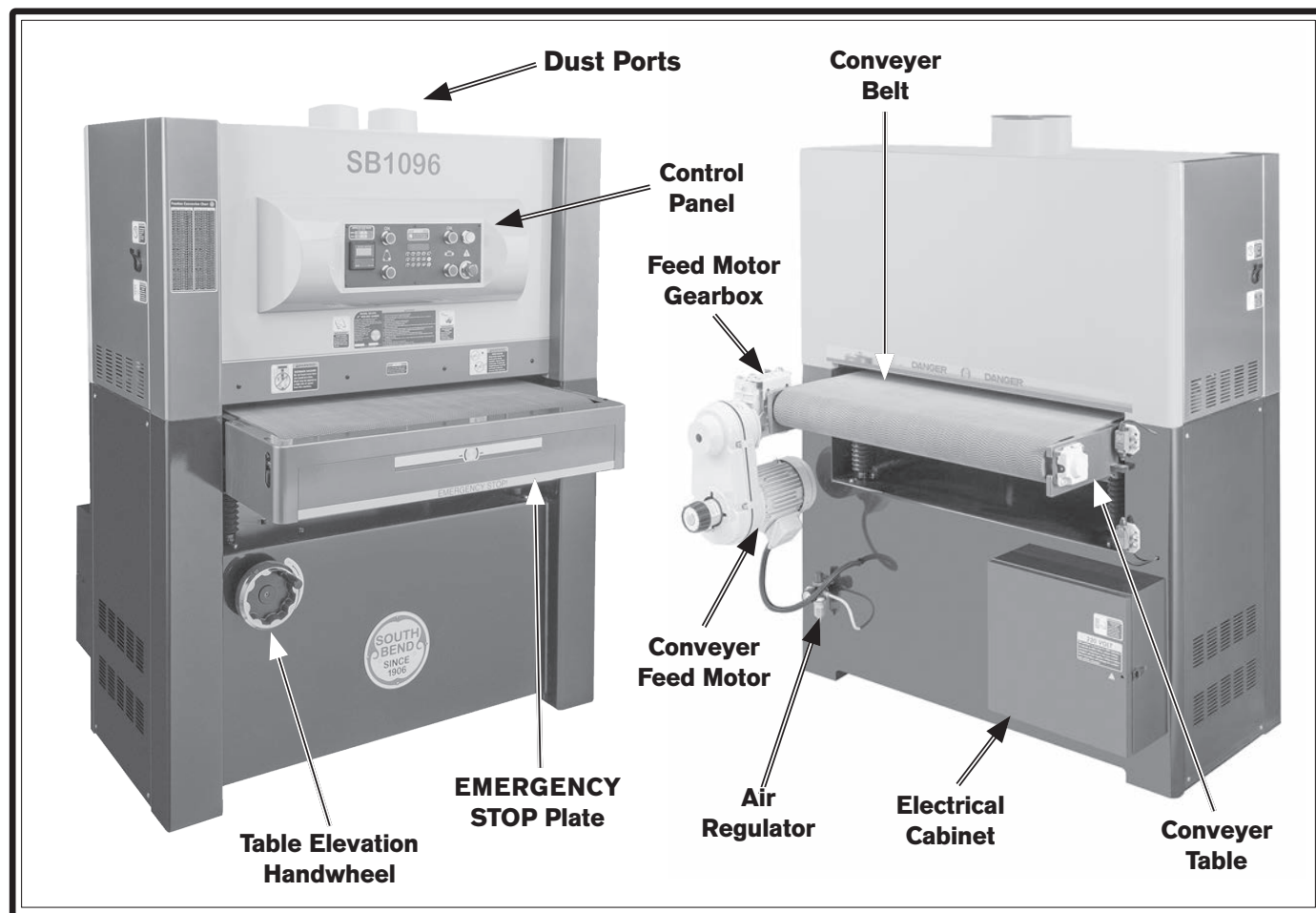
**South Bend Tools**  
**P.O. Box 2027**  
**Bellingham, WA 98227**  
**Phone: (360) 734-1540**  
**Fax: (360) 676-1075 (International)**  
**Fax: (360) 734-1639 (USA Only)**  
**Email: [sales@southbendtools.com](mailto:sales@southbendtools.com)**

# Table of Contents

<b>INTRODUCTION.....</b>	<b>2</b>	<b>SERVICE.....</b>	<b>41</b>
Identification .....	2	Adjusting Oscillation Timing & Speed .....	41
Description of Controls & Components .....	3	Servicing Platen .....	43
Product Specifications .....	6	Checking/Replacing Brake Pads .....	44
<b>SAFETY.....</b>	<b>8</b>	Checking/Adjusting Table Parallelism .....	47
Understanding Risks of Machinery .....	8	Checking/Adjusting Pressure Rollers .....	50
Basic Machine Safety .....	8	Checking/Adjusting V-Belt Tension.....	51
Additional Wide Belt Sander Safety .....	10	Changing V-Belts.....	52
<b>PREPARATION .....</b>	<b>11</b>	Adjusting Conveyor Belt Tension .....	54
Preparation Overview.....	11	Adjusting Conveyor Belt Tracking.....	55
Required for Setup.....	11	Replacing Conveyor Belt .....	56
Power Supply Requirements .....	12	Conveyor Belt Removal Sequence.....	57
Unpacking .....	14	Calibrating Digital Display .....	58
Inventory .....	14	Adjusting Belt Tracking Limit Switches .....	58
Cleaning & Protecting .....	15	<b>TROUBLESHOOTING.....</b>	<b>59</b>
Location .....	16	<b>PNEUMATIC SYSTEM.....</b>	<b>62</b>
Lifting & Placing.....	17	Pneumatic System Diagram.....	62
Leveling & Mounting.....	18	<b>ELECTRICAL.....</b>	<b>63</b>
Assembly .....	19	Electrical Safety Instructions .....	63
Dust Collection.....	21	Electrical Overview.....	64
Power Connection .....	22	Electrical System Schematic.....	65
Test Run .....	24	Electrical Cabinet .....	66
Inspections & Adjustments .....	26	Electrical Cabinet Wiring Diagram (220V).....	67
<b>OPERATION.....</b>	<b>27</b>	Electrical Cabinet Wiring Diagram (440V).....	68
Operation Overview.....	27	Control Panel Wiring.....	69
Sanding Workpieces .....	28	Main Motor & Conveyor Feed Motor Wiring ..	70
Workpiece Inspection.....	29	Table Elevation Motor Wiring.....	71
Sanding Tips .....	30	Air Pressure Limit Switch Wiring .....	71
Installing/Changing Sanding Belts.....	31	Sanding Belt & Table Limit Switch Wiring ....	72
Adjusting Platen .....	32	<b>PARTS.....</b>	<b>73</b>
Changing Feed Rate .....	33	Tool Box & Accessories .....	73
Reading Amp Meter.....	34	Sanding Motor System .....	74
Using EMERGENCY STOP Plate .....	34	Table Lift System.....	76
<b>ACCESSORIES.....</b>	<b>35</b>	Conveyor System .....	78
<b>MAINTENANCE .....</b>	<b>37</b>	Feed Roller .....	79
Maintenance Schedule.....	37	Sanding Drum.....	80
Machine Storage .....	37	Upper Roller System.....	82
Cleaning & Protecting .....	38	Cabinet Assembly .....	84
Lubrication .....	38	Electrical Cabinet & Control Panel .....	85
Emptying Dust and Water Traps.....	40	Belt Oscillation Pneumatic System .....	87
Cleaning Sanding Belt.....	40	Machine Labels .....	88
Pneumatic System .....	40	<b>WARRANTY.....</b>	<b>89</b>

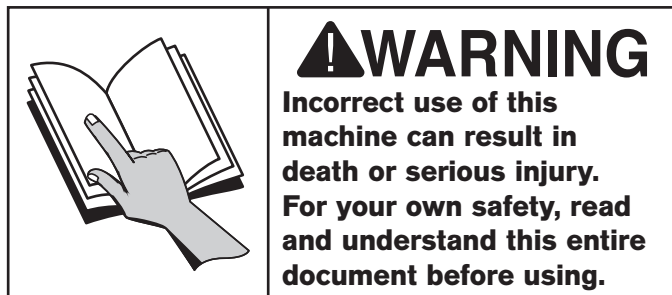


# Identification



# Description of Controls & Components

Refer to **Figures 1–8** and the following descriptions to become familiar with the basic controls and components used to operate this machine.



## Control Panel

- A. Amp Meter:** Indicates amp load of sanding belt motor during sanding operation. Used to determine maximum depth of cut sander can handle.
- B. Sanding Belt ON Button:** Turns sanding belt motor **ON** and illuminates when pressed.
- C. Sanding Belt OFF Button:** Turns sanding belt motor **OFF** and illuminates when pressed.
- D. Digital Display:** Shows table position in relation to drum (i.e. workpiece thickness).
- E. Key Pad:** Sets table height/workpiece thickness.
- F. Table Up and Down Keys** : Raise/lower table by 0.005" (0.125mm) increments.
- G. Set Key** : Inputs table position and switches between standard/metric display. Calibrates table position when pressed with Table Stop Key .
- H. Table Start Key** : Activates inputted table height/workpiece thickness.
- I. Table Stop Key** : Immediately stops table from moving up and down and cancels key pad entry. Calibrates table position when pressed with Set Key .
- J. Conveyor Belt ON Button:** Turns feed motor **ON** and illuminates when pressed.
- K. Conveyor Belt OFF Button:** Turns feed motor **OFF** when pressed.
- L. Power Indicator:** Illuminates when machine is connected to power.
- M. Emergency Stop Button:** Turns all machine functions **OFF** when pressed; engages emergency brake to stop rotation of sanding drum. Twist clockwise to reset in order to start sander again.



Figure 1. Control panel.

## Feed Rate

- N. Feed Rate Adjustment Knob:** While conveyor is moving, turn knob clockwise to speed up feed rate, and turn it counterclockwise to slow it down.

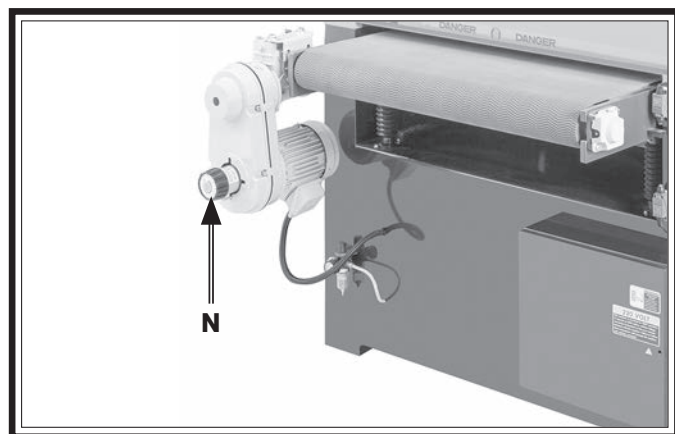


Figure 2. Conveyor feed rate adjustment knob.

## Table

- O. Conveyor Belt:** Feeds workpiece across conveyor table during sanding operations.
- P. Conveyor Table:** Supports workpiece during operations; can be raised and lowered according to workpiece thickness.
- Q. Table Elevation Handwheel:** Manually raises and lowers conveyor table. Rotate clockwise to lower table; rotate counterclockwise to raise table. One full rotation moves table approximately 0.20".
- R. EMERGENCY STOP Plate:** Stops all machine functions when pressed; engages emergency brake to stop rotating drum.

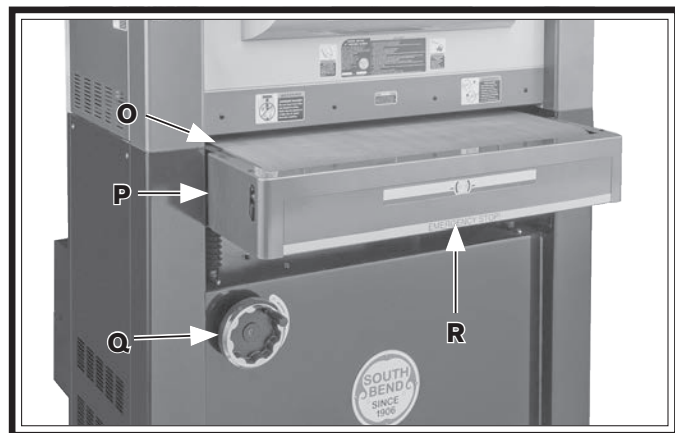


Figure 3. Table components.

## Belt Oscillation and Tension

- S. Belt Limit Switches:** Stop sanding drum motor if sanding belt tension or tracking is incorrect.
- T. Air Fork and Air Jet:** Directs sanding belt to reverse direction when it passes through air fork.
- U. Oscillation Airflow Adjustment Knob:** Controls amount of airflow to pneumatic cylinder.
- V. Oscillation Speed Adjustment Knob:** Controls oscillation speed of sanding belt as it moves left and right.

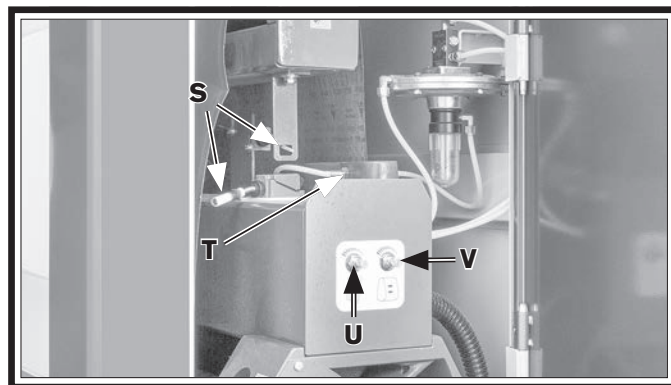


Figure 4. Location of limit switches, air fork, and adjustment knobs.

- W. Oscillation Timing Knob:** Adjusts timing of sanding belt oscillation from left to right.
- X. Belt Tension Knob:** Increases or decreases sanding belt tension.

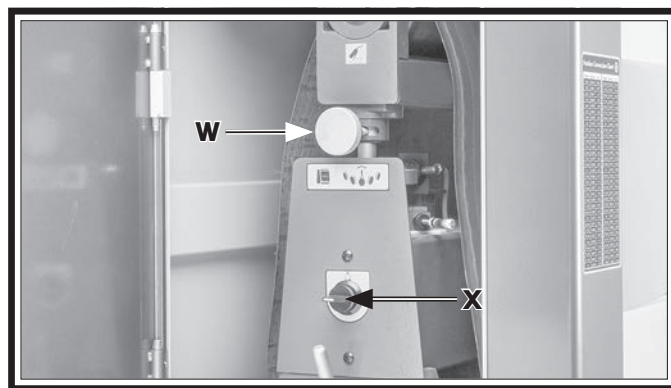


Figure 5. Location of oscillation timing and belt tension knobs.



## Air Regulation

- Y. Air Regulator Knob:** Adjusts incoming air pressure. Lift knob to rotate right/left to increase/decrease PSI shown on air regulator gauge.
- Z. Air Regulator Gauge:** Displays air pressure entering pneumatic system. Use air regulator knob to adjust pressure until gauge reads approximately 75 PSI.
- AA. Air Inlet:** Connects to compressed air supply of 75 PSI with a  $\frac{3}{8}$ " air hose. Regulates incoming air pressure for sanding belt oscillation when handle is in open position.

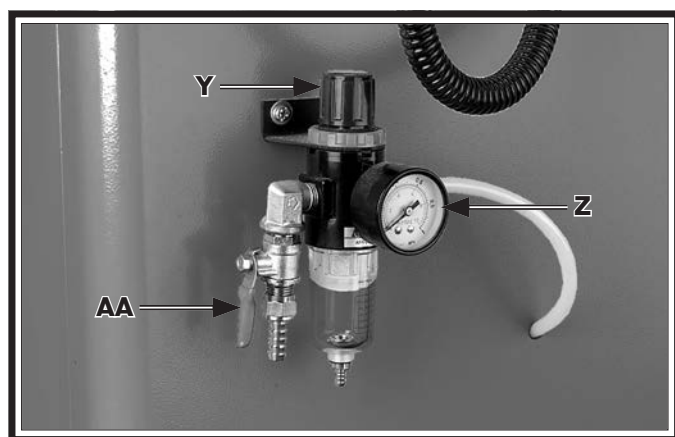


Figure 6. External air regulation components.

- AB. Diaphragm Valve Assembly:** Directs air for tracking and tension and collects and traps dust within.



Figure 7. Location of diaphragm valve assembly.

## Platen

- AC. Platen Adjustment Lever:** Adjusts platen height for three basic types of sanding: initial heavy sanding pass, intermediate finishing pass, and final sanding pass. Each turn of knob equals 0.2mm of platen movement.
- AD. Platen Adjustment Lock Lever:** Loosen to adjust platen height with platen adjustment lever. Tighten to secure platen height setting.
- AE. Lock Post Release Lever:** Unlocks to remove spacer block that holds platen and sanding belt in place. Most frequently used when changing sanding belts.

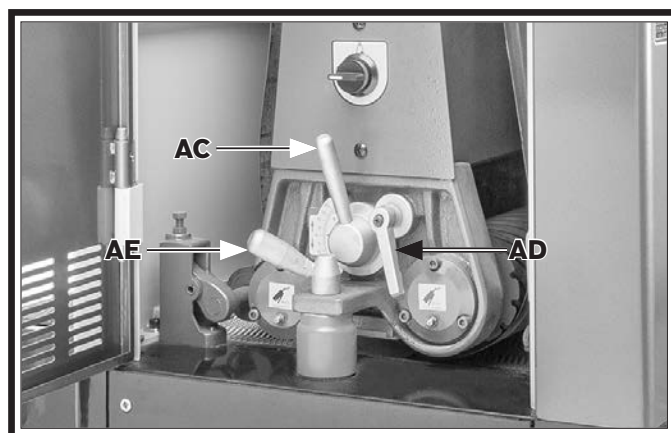


Figure 8. Platen adjustment and lock post release lever components.

## ⚠ WARNING

Serious personal injury could occur if you connect the machine to power before completing the setup process. **DO NOT** connect power until instructed to do so later in this manual.

## ⚠ WARNING

Untrained users have an increased risk of seriously injuring themselves with this machine. Do not operate this machine until you have understood this entire manual and received proper training.



## Model SB1096

### 37" 15 HP 3-Phase Wide-Belt Sander

#### Product Dimensions

Weight..... 1715 lbs.  
 Width (side-to-side) x Depth (front-to-back) x Height..... 81 x 50 x 66-1/2 in.  
 Footprint (Length x Width)..... 21-1/2 x 51-1/2 in.

#### Shipping Dimensions

Type..... Wood Slat Crate  
 Content..... Machine  
 Weight..... 1826 lbs.  
 Length x Width x Height..... 53 x 58 x 77 in.

#### Electrical

Power Requirement..... 220V or 440V, 3-Phase, 60 Hz  
 Prewired Voltage..... 220V  
 Full-Load Current Rating..... 40.1A at 220V, 20.1A at 440V  
 Minimum Circuit Size..... 50A at 220V, 30A at 440V  
 Connection Type..... Permanent (Hardwire to Shutoff Switch)  
 Switch Type..... Control Panel w/Magnetic Switch Protection

#### Motors

##### Main

Horsepower..... 15 HP  
 Phase..... 3-Phase  
 Amps..... 36.7A/18.4A  
 Speed..... 1760 RPM  
 Type..... TEFC Induction  
 Power Transfer ..... Belt  
 Bearings..... Sealed & Permanently Lubricated

##### Table Elevation

Horsepower..... 1/4 HP  
 Phase..... 3-Phase  
 Amps..... 1.2A/0.6A  
 Speed..... 1650 RPM  
 Type..... TEFC Induction  
 Power Transfer ..... Belt  
 Bearings..... Sealed & Permanently Lubricated



**Feed**

Horsepower.....	1 HP
Phase.....	3-Phase
Amps.....	3.4A/1.7A
Speed.....	1700 RPM
Type.....	TEFC Induction
Power Transfer .....	Belt
Bearings.....	Sealed & Permanently Lubricated

**Main Specifications****Operation Information**

Number of Sanding Heads.....	1
Maximum Board Width.....	36 in.
Minimum Board Width.....	2 in.
Maximum Board Thickness.....	5-3/4 in.
Minimum Board Thickness.....	1/8 in.
Minimum Board Length.....	14 in.
Sandpaper Speed.....	2600 FPM
Sanding Belt Oscillations.....	5/16 - 5/8 in.
Conveyor Feed Rate.....	15 - 49 FPM
Sandpaper Length.....	60 in.
Sandpaper Width.....	37 in.

**Drum Information**

Infeed Sanding Drum Type.....	Spiral Grooved Rubber
Infeed Sanding Drum Size.....	4 in.
Shore Hardness (Durometer).....	65 Shore

**Platen Information**

Platen Type.....	Adjustable
Platen Length.....	37-3/4 in.
Platen Width.....	3-1/2 in.
Platen Travel.....	0 - 2mm

**Construction**

Conveyor Belt.....	Rubber
Body.....	Steel
Paint Type/Finish.....	Powder Coated

**Other Related Information**

Floor To Table Height.....	32 - 36 in.
Belt Tracking.....	Pneumatic
Sanding Belt Tension.....	Pneumatic
Number of Pressure Rollers.....	2
Pressure Roller Type.....	Rubber
Pressure Roller Size.....	2 in.
Conveyor Belt Length.....	83 in.
Conveyor Belt Width.....	36-1/2 in.
Belt Roller Size.....	4 in.
Number of Dust Ports.....	3
Dust Port Size.....	5 in.
Air Requirement.....	75 PSI

# Understanding Risks of Machinery

Operating all machinery and machining equipment can be dangerous or relatively safe depending on how it is installed and maintained, and the operator's experience, common sense, risk awareness, working conditions, and use of personal protective equipment (safety glasses, respirators, etc.).

The owner of this machinery or equipment is ultimately responsible for its safe use. This responsibility includes proper installation in a safe environment, personnel training and usage authorization, regular inspection and maintenance, manual availability and comprehension, application of safety devices, integrity of cutting tools or accessories, and the usage of approved personal protective equipment by all operators and bystanders.

The manufacturer of this machinery or equipment will not be held liable for injury or property damage from negligence, improper training, machine modifications, or misuse. Failure to read, understand, and follow the manual and safety labels may result in serious personal injury, including amputation, broken bones, electrocution, or death.

The signals used in this manual to identify hazard levels are as follows:



*Death or catastrophic harm WILL occur.*



*Moderate injury or fire MAY occur.*



*Death or catastrophic harm COULD occur.*



*Machine or property damage may occur.*

## Basic Machine Safety

**Owner's Manual:** All machinery and machining equipment presents serious injury hazards to untrained users. To reduce the risk of injury, anyone who uses THIS item MUST read and understand this entire manual before starting.

**Personal Protective Equipment:** Operating or servicing this item may expose the user to flying debris, dust, smoke, dangerous chemicals, or loud noises. These hazards can result in eye injury, blindness, long-term respiratory damage, poisoning, cancer, reproductive harm or hearing loss. Reduce your risks from these hazards by wearing approved eye protection, respirator, gloves, or hearing protection.

**Trained/Supervised Operators Only:** Untrained users can seriously injure themselves or bystanders. Only allow trained and properly supervised personnel to operate this item. Make sure safe operation instructions are clearly understood. If electrically powered, use padlocks and master switches, and remove start switch keys to prevent unauthorized use or accidental starting.

**Guards/Covers:** Accidental contact with moving parts during operation may cause severe entanglement, impact, cutting, or crushing injuries. Reduce this risk by keeping any included guards/covers/doors installed, fully functional, and positioned for maximum protection.

**Entanglement:** Loose clothing, gloves, neckties, jewelry or long hair may get caught in moving parts, causing entanglement, amputation, crushing, or strangulation. Reduce this risk by removing/securing these items so they cannot contact moving parts.

**Mental Alertness:** Operating this item with reduced mental alertness increases the risk of accidental injury. Do not let a temporary influence or distraction lead to a permanent disability! Never operate when under the influence of drugs/alcohol, when tired, or otherwise distracted.

**Safe Environment:** Operating electrically powered equipment in a wet environment may result in electrocution; operating near highly flammable materials may result in a fire or explosion. Only operate this item in a dry location that is free from flammable materials.

**Electrical Connection:** With electrically powered equipment, improper connections to the power source may result in electrocution or fire. Always adhere to all electrical requirements and applicable codes when connecting to the power source. Have all work inspected by a qualified electrician to minimize risk.

**Disconnect Power:** Adjusting or servicing electrically powered equipment while it is connected to the power source greatly increases the risk of injury from accidental startup. Always disconnect power **BEFORE** any service or adjustments, including changing blades or other tooling.

**Secure Workpiece/Tooling:** Loose workpieces, cutting tools, or rotating spindles can become dangerous projectiles if not secured or if they hit another object during operation. Reduce the risk of this hazard by verifying that all fastening devices are properly secured and items attached to spindles have enough clearance to safely rotate.

**Chuck Keys or Adjusting Tools:** Tools used to adjust spindles, chucks, or any moving/rotating parts will become dangerous projectiles if left in place when the machine is started. Reduce this risk by developing the habit of always removing these tools immediately after using them.

**Work Area:** Clutter and dark shadows increase the risks of accidental injury. Only operate this item in a clean, non-glaring, and well-lighted work area.

**Properly Functioning Equipment:** Poorly maintained, damaged, or malfunctioning equipment has higher risks of causing serious personal injury compared to those that are properly maintained. To reduce this risk, always maintain this item to the highest standards and promptly repair/service a damaged or malfunctioning component. Always follow the maintenance instructions included in this documentation.

**Unattended Operation:** Electrically powered equipment that is left unattended while running cannot be controlled and is dangerous to bystanders. Always turn the power **OFF** before walking away.

**Health Hazards:** Certain cutting fluids and lubricants, or dust/smoke created when cutting, may contain chemicals known to the State of California to cause cancer, respiratory problems, birth defects, or other reproductive harm. Minimize exposure to these chemicals by wearing approved personal protective equipment and operating in a well ventilated area.

**Difficult Operations:** Attempting difficult operations with which you are unfamiliar increases the risk of injury. If you experience difficulties performing the intended operation, STOP! Seek an alternative method to accomplish the same task, ask a qualified expert how the operation should be performed, or contact our Technical Support for assistance.

# Additional Wide Belt Sander Safety

## WARNING

**Serious injury or death can occur from getting hands trapped between workpiece and conveyor table and being pulled into machine, or becoming entangled in rotating parts inside machine. Workpieces thrown by sander can strike nearby operator or bystanders with significant force. Long-term respiratory damage can occur from using sander without proper use of respirator. To reduce the risk of these hazards, operator and bystanders MUST completely heed the hazards and warnings below.**

**Feeding Workpiece.** Placing fingers between workpiece and conveyor can result in pinching injuries, or possibly getting fingers trapped and pulled into sanding area of machine. **DO NOT** place fingers under bottom of workpiece while feeding it into sander.

**Sanding Dust.** Sanding creates large amounts of fine airborne dust that can lead to eye injury or serious respiratory illness. Reduce your risk by always wearing approved eye and a respirator when sanding. Never operate without adequate dust collection system in place and running. However, also remember a dust collection system is not a substitute for using a respirator.

**Avoiding Entanglement.** Tie back long hair, remove jewelry, and do not wear loose clothing or gloves. These can easily get caught in moving parts. Never reach inside machine or try to clear jammed workpiece while machine is operating. Keep all guards in place and secure.

**Power Disconnect.** An accidental startup while changing sanding belts or performing adjustments or maintenance can result in entanglement or abrasion injuries. Make sure machine is turned **OFF**, disconnected from power and air, and all moving parts are completely stopped before changing belts, doing adjustments, or performing maintenance.

**Kickback.** Occurs when a workpiece is ejected out the front of sander at a high rate of speed toward operator or bystanders. To reduce risk of kickback-related injuries, always stay out of workpiece path, only feed one board at a time, and always make sure pressure rollers are properly adjusted below sanding roller. Never sand workpiece below minimum specifications listed in **Product Specifications**.

**Sandpaper Contact.** Rotating sandpaper can remove a large amount of flesh quickly. Keep hands away from rotating sanding drum(s) during operation. Never touch moving sandpaper.

## WARNING

**Like all machinery there is potential danger when operating this machine. Accidents are frequently caused by lack of familiarity or failure to pay attention. Use this machine with respect and caution to decrease the risk of operator injury. If normal safety precautions are overlooked or ignored, serious personal injury may occur.**

## CAUTION

**No list of safety guidelines can be complete. Every shop environment is different. Always consider safety first, as it applies to your individual working conditions. Use this and other machinery with caution and respect. Failure to do so may result in serious personal injury or property damage.**

## Preparation Overview

The purpose of the preparation section is to help you prepare your machine for operation. The list below outlines the basic process. Specific steps for each of these points will be covered in detail later in this section.

### The typical preparation process is as follows:

1. Unpack the machine and inventory the contents of the box/crate.
2. Clean the machine and its components.
3. Identify an acceptable location for the machine and move it to that location.
4. Level the machine and bolt it to the floor.
5. Assemble the loose components and make any necessary adjustments or inspections to ensure the machine is ready for operation.
6. Connect the machine to the power source.
7. Test run the machine to make sure it functions properly and is ready for operation.

## Required for Setup

The items listed below are required to successfully set up and prepare this machine for operation.

### For Lifting

- A forklift or other power lifting device (rated for at least 2800 lbs.).

### For Power Connection

- A power source that meets the minimum circuit requirements for this machine. (Refer to the **Power Supply Requirements** section for details.)
- A qualified electrician to ensure a safe and code-compliant connection to the power source.

### For Assembly

- An Assistant
- Safety Glasses (for each person)
- Disposable Rags
- Disposable Gloves
- Cleaner/Degreaser
- Prybar
- Precision Level
- Floor Mounting Hardware (As Needed)
- Open-End Wrench 14, 18mm
- Compressed Air Hose  $\frac{3}{8}$ " and Hose Clamp
- 42" Long 2x4
- 6' Long 2x4
- Gear Oil
- Dust Collection System
- Dust Collection Hoses 5"
- Hose Clamps 5"

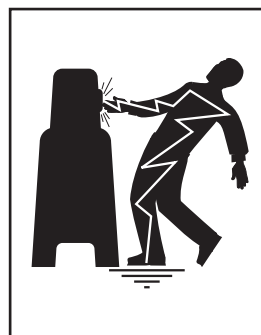


# Power Supply Requirements

## Availability

Before installing the machine, consider the availability and proximity of the required power supply circuit. If an existing circuit does not meet the requirements for this machine, a new circuit must be installed.

To minimize the risk of electrocution, fire, or equipment damage, installation work and electrical wiring must be done by an electrician or qualified service personnel in accordance with applicable electrical codes and safety standards.



## ! WARNING

**Electrocution or fire may occur if machine is not correctly grounded and attached to the power supply. Use a qualified electrician to ensure a safe power connection.**

## Full-Load Current Rating

The full-load current rating is the amperage a machine draws at 100% of the rated output power. On machines with multiple motors, this is the amperage drawn by the largest motor or sum of all motors and electrical devices that might operate at one time during normal operations.

**Full-Load Rating at 220V..... 40.1 Amps**

**Full-Load Rating at 440V..... 20.1 Amps**

The full-load current is not the maximum amount of amps that the machine will draw. If the machine is overloaded, it will draw additional amps beyond the full-load rating.

If the machine is overloaded for a sufficient length of time, damage, overheating, or fire may result—especially if connected to an undersized circuit. To reduce the risk of these hazards, avoid overloading the machine during operation and make sure it is connected to a power supply circuit that meets the requirements in the following section.

## Circuit Information

A power supply circuit includes all electrical equipment between the main breaker box or fuse panel in your building and the incoming power connections inside the machine. This circuit must be safely sized to handle the full-load current that may be drawn from the machine for an extended period of time. (If this machine is connected to a circuit protected by fuses, use a time delay fuse marked D.)

## ! CAUTION

**For your own safety and protection of property, consult an electrician if you are unsure about wiring practices or applicable electrical codes.**

**Note:** The circuit requirements in this manual are for a dedicated circuit—where only one machine will be running at a time. If this machine will be connected to a shared circuit where multiple machines will be running at the same time, consult a qualified electrician to ensure the circuit is properly sized.

## Circuit Requirements for 220V

This machine is prewired to operate on a power supply circuit that has a verified ground and meets the following requirements:

**Nominal Voltage..... 220V/230V/240V**  
**Cycle.....60 Hz**  
**Phase..... 3-Phase**  
**Circuit Rating..... 50 Amps**

## Circuit Requirements for 440V

This machine can be converted to operate on a 440V power supply. To do this, follow the **Voltage Conversion** instructions included in this manual. The intended 440V circuit must have a verified ground and meet the following requirements:

**Nominal Voltage..... 440V/480V**  
**Cycle.....60 Hz**  
**Phase..... 3-Phase**  
**Circuit Rating..... 30 Amps**

## Connection Type

A permanently connected (hardwired) power supply is typically installed with wires running through mounted and secured conduit. A disconnecting means, such as a locking switch (see following figure) must be provided to allow the machine to be disconnected (isolated) from the power supply when required. This installation must be preformed by an electrician in accordance with all applicable electrical codes and ordinances.

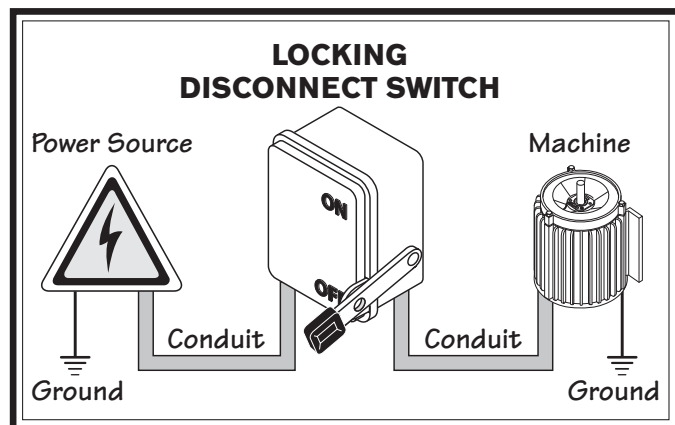


Figure 9. Typical setup of a permanently connected machine.

## Grounding Requirements

This machine must be grounded! In the event of certain types of malfunctions or breakdowns, grounding provides a path of least resistance for electric current in order to reduce the risk of electric shock.

Power supply connections that are hardwired to the power source must be connected to a grounded metal permanent wiring system, or to a system having an equipment-grounding conductor.

## ⚠ WARNING

**Serious injury could occur if you connect the machine to power before completing the setup process. DO NOT connect to power until instructed later in this manual.**

## Extension Cords

Since this machine must be permanently connected to the power supply, an extension cord cannot be used.

## Voltage Conversion

The voltage conversion **MUST** be performed by a qualified electrician. To perform the voltage conversion, rewire the motors to the new voltage according to the provided wiring diagram. *If the diagram included on the motor conflicts with the one in this manual, the motor may have changed since the manual was printed. Use the diagram provided on the motor.*

**Note About 3-Phase Power:** DO NOT use a static phase converter to create 3-phase power—it can quickly decrease the life of electrical components on this machine. If you must use a phase converter, only use a rotary phase converter.

You can find the Model G7978, a compatible phase converter from our exclusive dealer, Grizzly Industrial, Inc., at [www.grizzly.com](http://www.grizzly.com).

### G7978—15 HP Rotary Phase Converter

This rotary phase converter allows you to operate 3-phase machinery from a single-phase power source at 100% power and 95% efficiency.

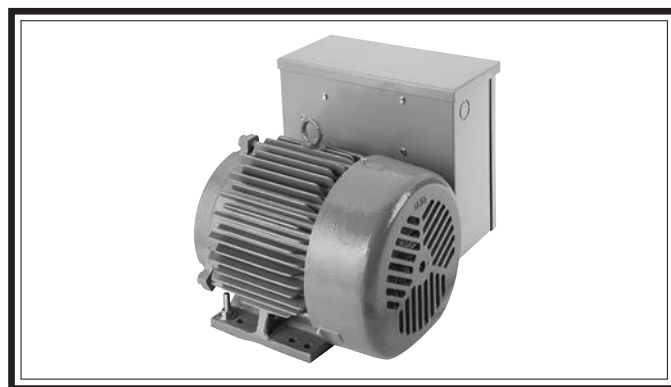


Figure 10. G7978 15 HP Rotary Phase Converter.

## Unpacking

This item was carefully packaged to prevent damage during transport. If you discover any damage, please immediately call Customer Service at (360) 734-1540 for advice. You may need to file a freight claim, so save the containers and all packing materials for possible inspection by the carrier or its agent.

### NOTICE

If you cannot find an item on this list, carefully check around/inside the machine and packaging materials. Often, these items get lost in packing materials while unpacking or they are pre-installed at the factory.

## Inventory

### Inventory (Figure 11)

	Qty
A. Wide Belt Sander (Not Shown) .....	1
B. Toolbox (Not Shown) .....	1
C. Sanding Belt 37" x 60" 100-Grit .....	1
D. Sanding Belt 37" x 60" 180-Grit .....	1
E. Graphite Pads .....	2
F. Felt Pad .....	1
G. Hex Wrench Set (1.5-10mm) .....	1
H. Open-End Wrench 17/19mm .....	1
I. Open-End Wrench 12/14mm .....	1
J. Open-End Wrench 8/10mm .....	1
K. Door Keys .....	2
L. Fuses 4A 600V .....	2
M. Limit Switch Tips .....	2
N. Flexible Grease Gun Extension .....	1
O. Platen Removal Tool .....	1
P. Phillips Screwdriver #2 .....	1
Q. Flat Head Screwdriver #2 .....	1

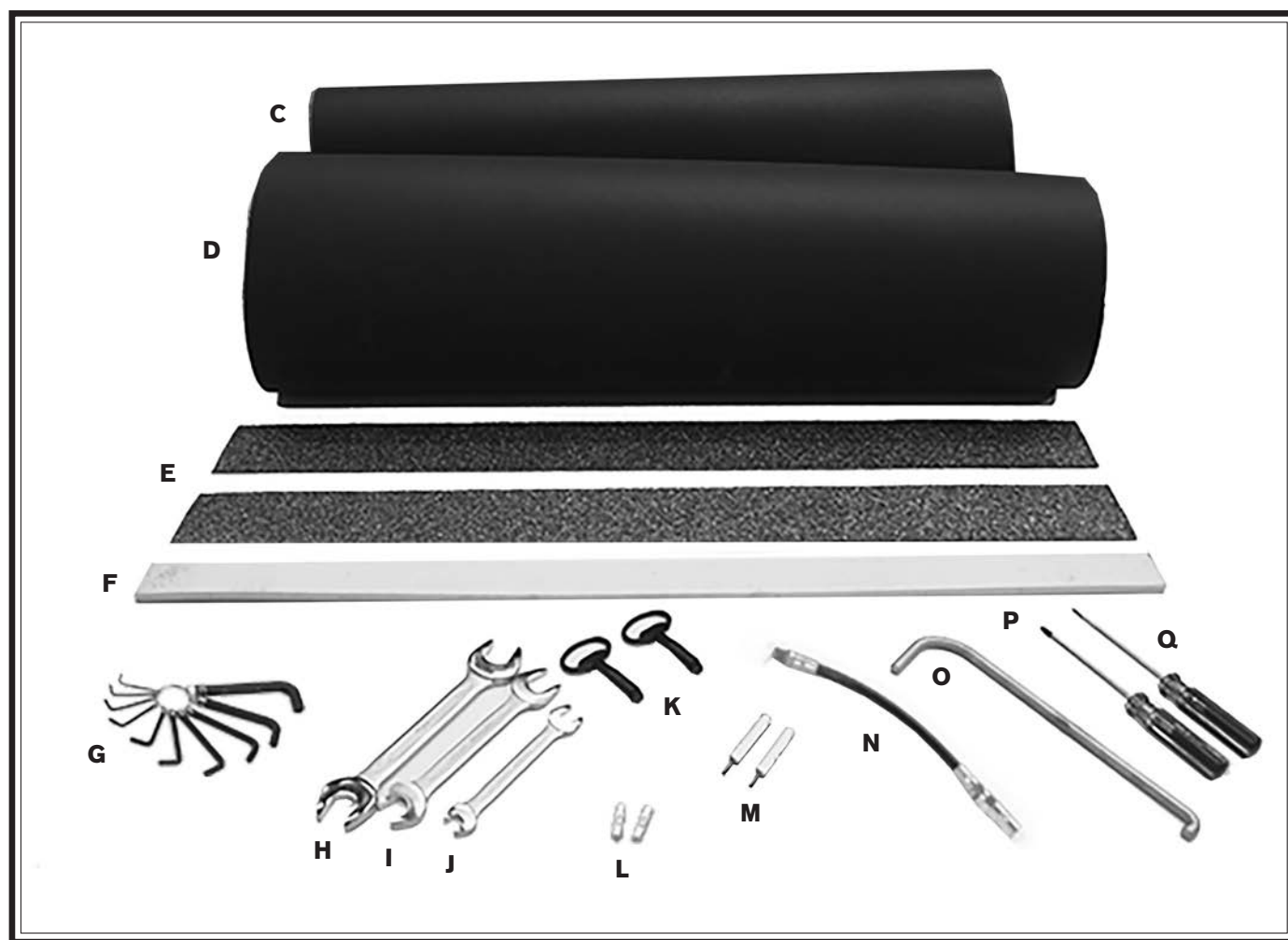


Figure 11. Inventory.

## Cleaning & Protecting

The unpainted surfaces are coated at the factory with a heavy-duty rust preventative that prevents corrosion during shipment and storage. The benefit of this rust preventative is that it works very well. The downside is that it can be time-consuming to thoroughly remove.

Be patient and do a careful job when cleaning and removing the rust preventative. The time you spend doing this will reward you with smooth-sliding parts and a better appreciation for the proper care of the unpainted surfaces.

Although there are many ways to successfully remove the rust preventative, the following process works well in most situations.

### Before cleaning, gather the following:

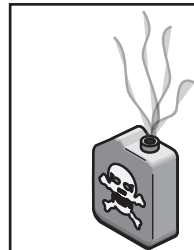
- Disposable rags
- Cleaner/degreaser (certain citrus-based degreasers work extremely well and they have non-toxic fumes)
- Safety glasses & disposable gloves

**Note:** Automotive degreasers, mineral spirits, or WD•40 can be used to remove rust preventative. Before using these products, though, test them on an inconspicuous area of a painted surface to make sure they will not damage it.



### ! WARNING

Gasoline and petroleum products have low flash points and can explode or cause fire if used for cleaning. Avoid using these products to remove rust preventative.



### ! CAUTION

Many cleaning solvents are toxic if inhaled. Minimize your risk by only using these products in a well ventilated area.

## NOTICE

**Avoid chlorine-based solvents, such as acetone or brake parts cleaner that may damage painted surfaces. Always follow the manufacturer's instructions when using any type of cleaning product.**

### Basic steps for removing rust preventative:

1. Put on safety glasses and disposable gloves.
  2. Coat all surfaces that have rust preventative with a liberal amount of your cleaner or degreaser and let them soak for a few minutes.
  3. Wipe off the surfaces. If your cleaner or degreaser is effective, the rust preventative will wipe off easily.
- Note:** To clean off thick coats of rust preventative on flat surfaces, such as beds or tables, use a PLASTIC paint scraper to scrape off the majority of the coating before wiping it off with your rag. (Do not use a metal scraper or it may scratch the surface.)
4. Repeat Steps 2–3 as necessary until clean, then coat all unpainted surfaces with a quality metal protectant or light oil to prevent rust.

### T23692—Orange Power Degreaser

A great product for removing the waxy shipping grease from the **non-painted** parts of the machine during clean up.

Call  
1-800-523-4777  
To Order



Figure 12. T23692 Orange Power Degreaser.

## Location

### Physical Environment

The physical environment where your machine is operated is important for safe operation and longevity of parts. For best results, operate this machine in a dry environment that is free from excessive moisture, hazardous or flammable chemicals, airborne abrasives, or extreme conditions. Extreme conditions for this type of machinery are generally those where the ambient temperature is outside the range of 41°–104°F; the relative humidity is outside the range of 20–95% (non-condensing); or the environment is subject to vibration, shocks, or bumps.

### Electrical Installation

Place this machine near an existing power source. Make sure all power cords are protected from traffic, material handling, moisture, chemicals, or other hazards. Make sure to leave access to a means of disconnecting the power source or engaging a lockout/tagout device.

### Lighting

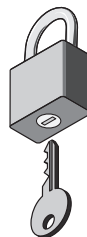
Lighting around the machine must be adequate enough to perform operations safely. Shadows, glare, or strobe effects that may distract or impede the operator must be eliminated.

### Weight Load

Refer to the **Machine Specifications** for the weight of your machine. Make sure that the surface upon which the machine is placed will bear the weight of the machine, additional equipment that may be installed on the machine, and the heaviest workpiece that will be used. Additionally, consider the weight of the operator and any dynamic loading that may occur when operating the machine.

### Space Allocation

Consider the largest size of workpiece that will be processed through this machine and provide enough space around the machine for adequate operator material handling or the installation of auxiliary equipment. With permanent installations, leave enough space around the machine to open or remove doors/covers as required by the maintenance and service described in this manual.



### CAUTION

**Children or untrained people may be seriously injured by this machine. Only install in an access restricted location.**

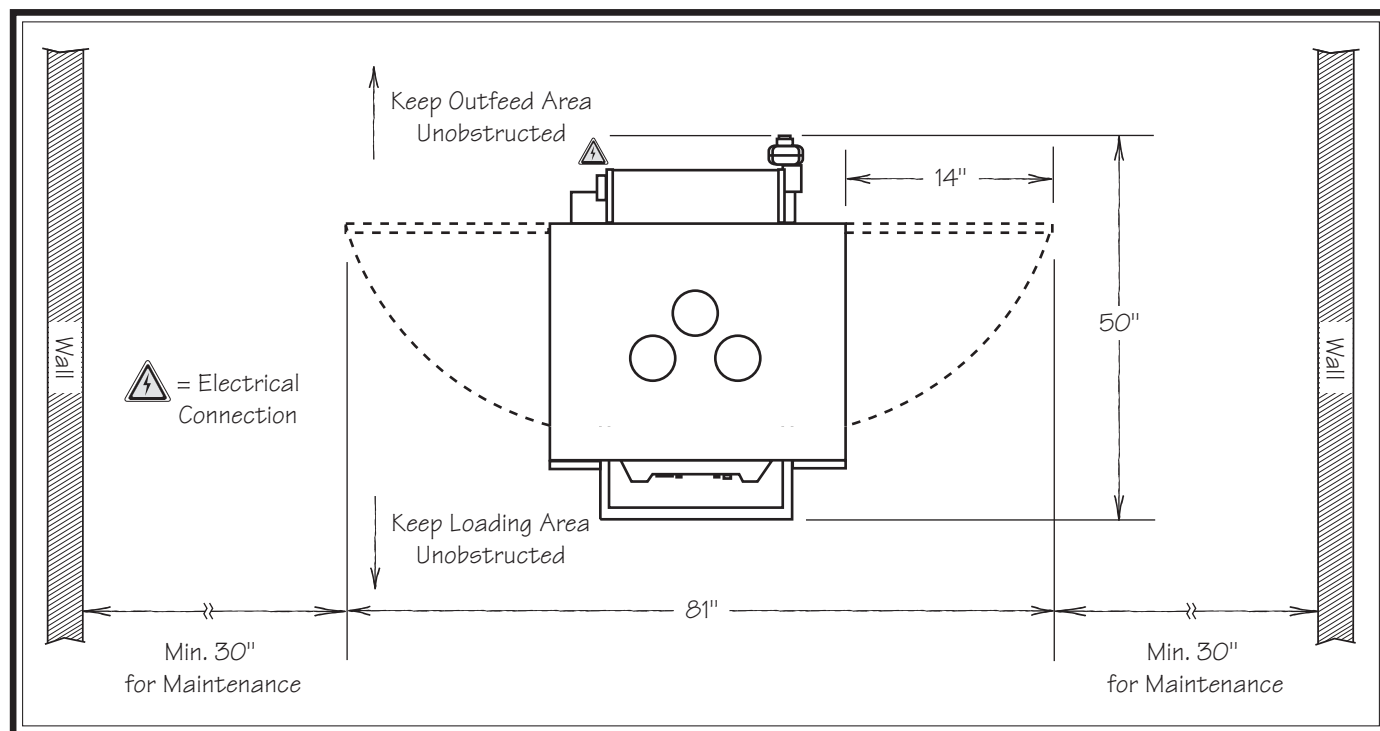
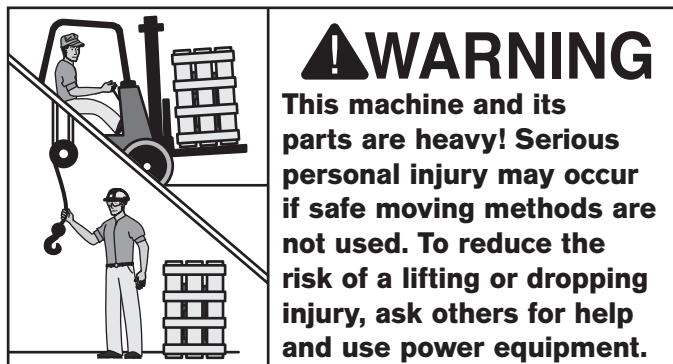


Figure 13. Clearances.



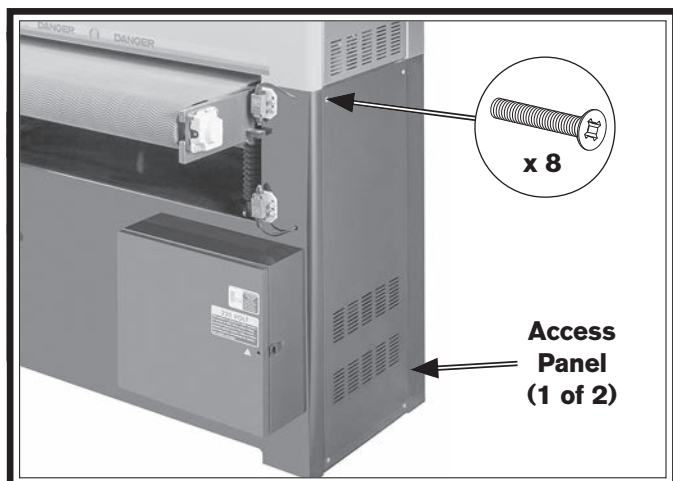
# Lifting & Placing



Do not attempt to lift or move this machine without using the proper lifting equipment (such as forklift or crane). Each piece of lifting equipment must be rated for at least 2800 lbs. to support dynamic loads that may be applied while lifting.

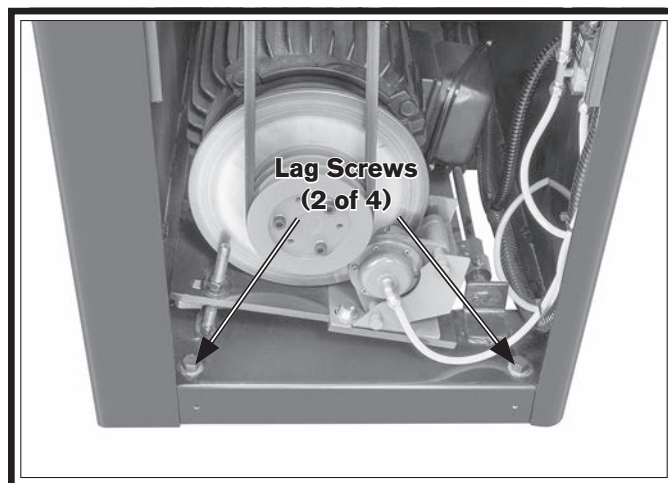
## To lift and place machine:

1. Remove shipping crate top and sides, then remove small components from shipping pallet.
2. Move machine to prepared location while it is still attached to shipping pallet.
3. Remove (8) flat head screws and (2) access panels (see **Figure 14**).



**Figure 14. Location of access panels and flat head screws.**

4. Remove (4) lag screws and flat washers securing machine to pallet (see **Figure 15**).



**Figure 15. Location of lag screws.**

5. Carefully place forklift forks under sander (see **Figure 16**).



**Figure 16. Placing fork lift forks under sander.**

6. Lift sander off pallet, remove pallet, then slowly lower sander into position.

## Leveling & Mounting

Generally, you can either bolt your machine to the floor or mount it on machine mounts. Although not required, we recommend that you secure the machine to the floor and level it while doing so. Because this is an optional step and floor materials may vary, hardware for securing the machine to the floor is not included.

### NOTICE

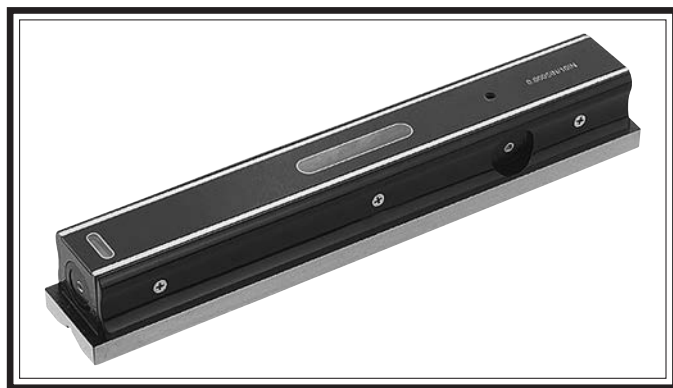
**We strongly recommend securing your machine to the floor if it is hardwired to the power source. Consult with your electrician to ensure compliance with local codes.**

## Leveling

Leveling machinery helps precision components, such as conveyor tables, remain straight and flat during the lifespan of the machine. Components on a machine that are not level may slowly twist due to the dynamic loads placed on the machine during operation.

For best results, use a precision level that is at least 12" long and sensitive enough to show a distinct movement when a 0.003" shim (approximately the thickness of one sheet of standard newspaper) is placed under one end of the level.

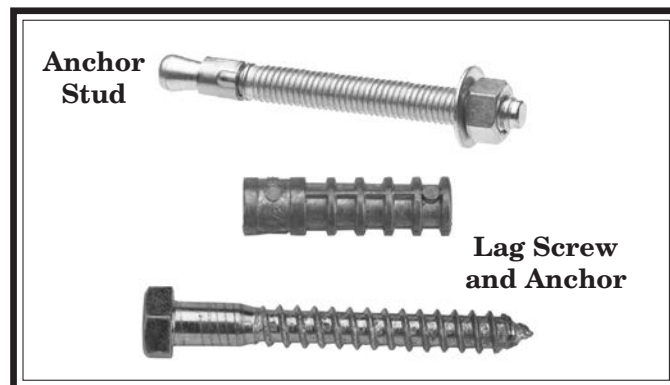
See the figure below for an example of a high precision level.



**Figure 17. Example of a precision level.**

## Bolting to Concrete Floors

Lag screws and anchors, or anchor studs (below), are two popular methods for securing machinery to a concrete floor. We suggest you research the many options and methods for securing your machine and choose the best one for your specific application.



**Figure 18. Common types of fasteners for bolting machinery to concrete floors.**

# Assembly

The machine must be fully assembled before it can be operated. Before beginning the assembly process, refer to **Required for Setup** and gather all the items listed. To ensure the assembly process goes smoothly, first clean any parts that are covered or coated in heavy-duty rust preventative (if applicable).

Assembly of the Model SB1096 consists of installing the air line and the sanding belt, and verifying the factory-set pressure roller settings.

## To assemble machine:

1. Connect compressed air line to air inlet on regulator (see **Figure 19**) and secure with hose clamp.
2. Start air compressor or open air valve at compressor.
3. Make sure red ON/OFF handle on regulator is in open position (see **Figure 19**).

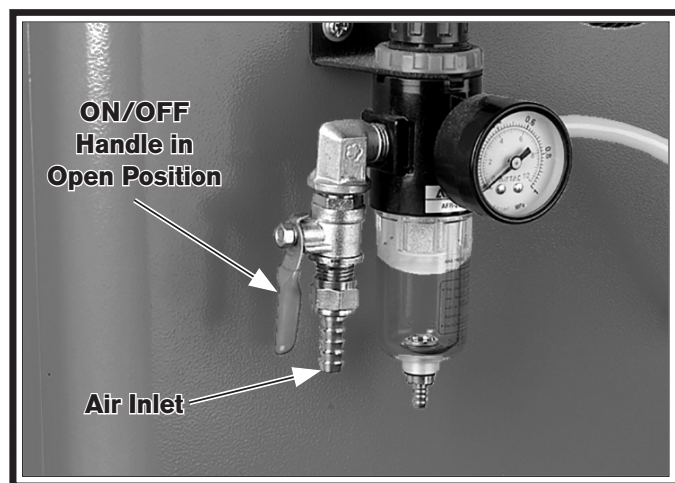


Figure 19. Air regulator inlet and ON/OFF handle.

4. Lift regulator knob to unlock (see **Figure 20**) and rotate it until gauge reads 75 PSI.

**Note:** Rotate knob clockwise to increase air pressure and counterclockwise to decrease.

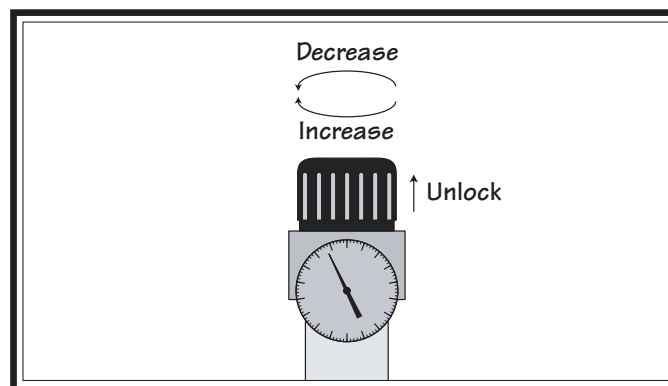


Figure 20. Regulator knob.

5. Push knob down until it snaps to lock knob.
6. With machine connected to air, open left door and turn belt tension knob to detensioned position (see **Figure 21**).
7. Remove lock post release lever by turning it counterclockwise and pulling it up and out of mounting hole (see **Figure 21**).
8. Remove spacer block (see **Figure 21**).

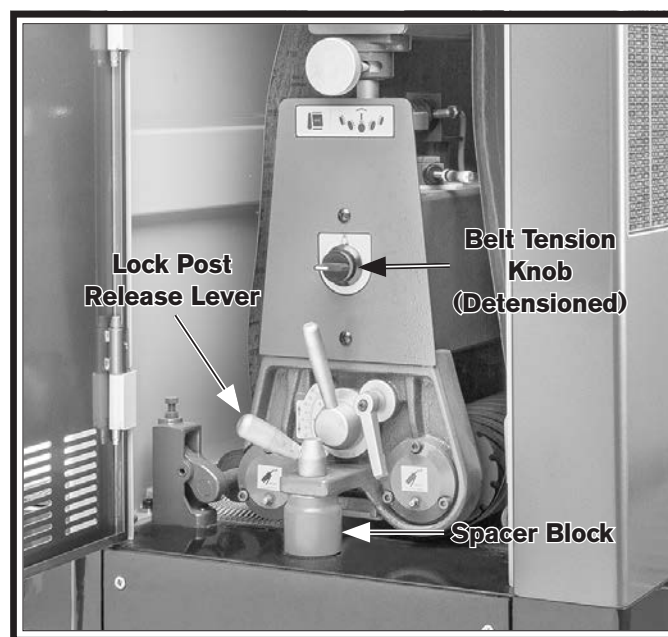


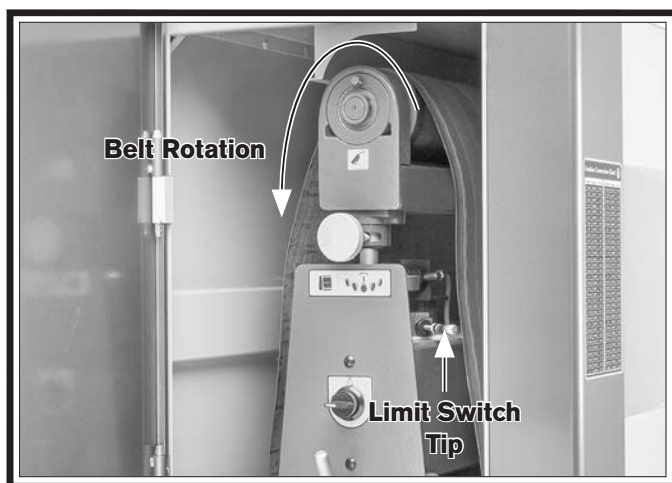
Figure 21. Components for changing sanding belt.

## NOTICE

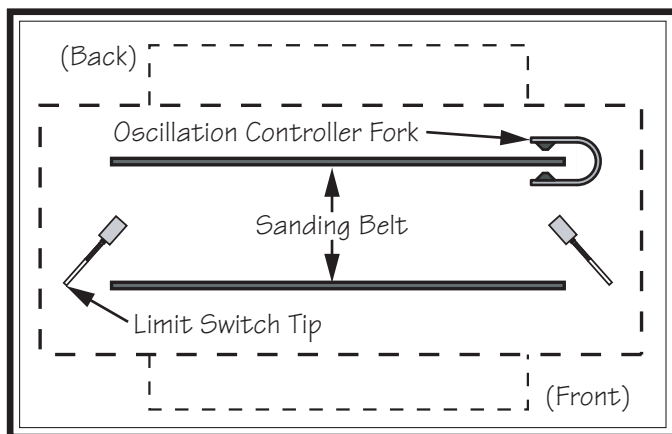
**Directional arrows on back of sanding belt must be pointing in a counterclockwise direction during installation. Failure to install sanding belt correctly will result in damage to sanding belt.**

9. Install sanding belt on upper roller and lower roller, starting with upper, making sure rotation arrows on sanding belt point in same direction as those shown in **Figure 22**,

**Note:** *Sanding belt must be centered between limit switch tips and edge of sanding belt must be between tongs of belt oscillation controller fork, as shown in **Figures 22–23**. Damage to sanding belt may occur if sander is tensioned and turned **ON** before sanding belt is correctly positioned.*



**Figure 22. Sanding belt placement components.**



**Figure 23. Sander outline (top view) of proper position of belt.**

10. Replace spacer block and lock post release lever.
11. With hands clear of all moving parts, turn belt tension knob to tension sanding belt.

## WARNING

**Pressure rollers must be set below level of sanding roller. If pressure rollers are even, or higher than sanding roller, workpiece may be propelled from machine at high rate of speed toward front of machine, causing serious kickback injury to operator or bystanders.**

12. Joint 42" 2x4 so one side is flat, then use flat side on table saw, against fence, to cut opposite side parallel.

**IMPORTANT:** *2x4 MUST have uniform thickness for following steps to be completed correctly.*

13. Place 2x4 across one side of conveyor table so it spans both front and rear pressure rollers (see **Figure 24**).



**Figure 24. 2x4 positioned to check pressure roller height.**

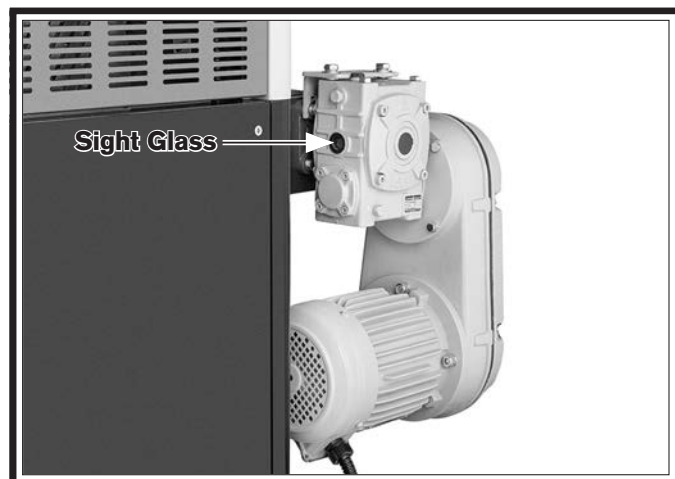
14. Manually raise conveyor table and verify that board touches both pressure rollers before touching sanding belt.



14. Repeat **Steps 12–13** on other side of conveyor belt.

**Note:** *If board did not touch both pressure rollers before touching sanding belt on either side, or if board was difficult to place between rollers and table, then pressure rollers **MUST** be adjusted before operation. See **Page 50** for instructions.*

15. Check sight glass shown in **Figure 25** to make sure gear oil is present.



**Figure 25. Sight glass location on gearbox.**

— If gearbox level is below sight glass level, refer to **Lubrication** on **Page 38** to add gear oil.

## Dust Collection

### ⚠ CAUTION

**This machine creates a lot of wood chips/dust during operation. Breathing airborne dust on a regular basis can result in permanent respiratory illness. Reduce your risk by wearing a respirator and capturing the dust with a dust-collection system.**

#### Minimum CFM for Model SB1096: 1800 CFM

*Do not confuse this CFM recommendation with the rating of the dust collector. To determine the CFM at the dust port, you must consider these variables: (1) CFM rating of the dust collector, (2) hose type and length between the dust collector and the machine, (3) number of branches or wyes, and (4) amount of other open lines throughout the system. Explaining how to calculate these variables is beyond the scope of this manual. Consult an expert or purchase a good dust collection "how-to" book.*

#### To connect dust collection system to machine:

1. Fit a 5" dust hose over each dust port, and secure them in place with hose clamps (see **Figure 26**).



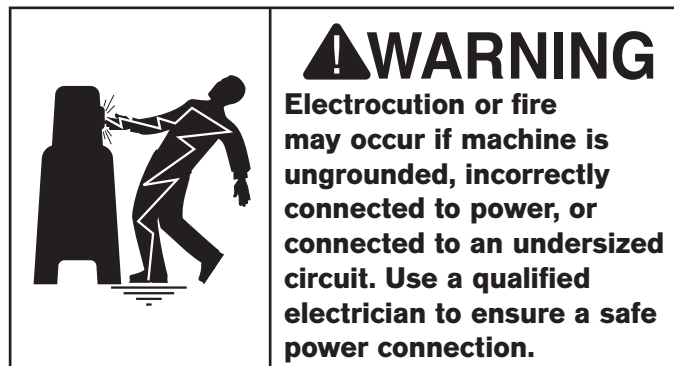
**Figure 26. Dust hoses attached.**

2. Tug hoses to make sure they do not come off.

**Note:** *A tight fit is necessary for proper performance.*



## Power Connection



Once your machine is set up and assembled as previously described in this manual, it is ready to be connected to the power supply.

**Note About 3-Phase Power:** DO NOT use a static phase converter to create 3-phase power—it can quickly decrease the life of electrical components on this machine. If you must use a phase converter, only use a rotary phase converter and connect the manufactured leg to the correct power connection terminal, shown in the wiring diagrams on **Pages 67–68**.

## 440V Conversion

The Model SB1096 is prewired to operate on 220V power, but it can be converted for 440V operation using the optional conversion kit (#PSB10968134), which contains two replacement overload relays. 440V conversion consists of: 1) disconnecting the machine from the power source, 2) moving a wire on the transformer from the 220V to the 440V terminal, 3) replacing the main and feed motor overload relays, and 4) rewiring the motors for 440V operation. Wiring diagrams are provided in the back of this manual showing the Model SB1096 wired for both 220V and 440V. Refer to these when following this procedure.

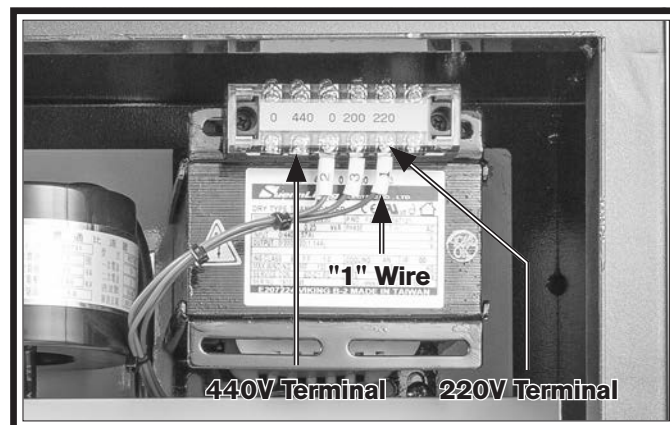
All wiring changes must be done by an electrician or qualified service personnel. If, at any time during this procedure assistance is needed, call Grizzly Tech Support at (570) 546-9663.

### Items Needed

	Qty
Phillips Head Screwdriver #2.....	1
Schneider LR3D325 Overload Relay.....	1
Schneider LR3D07 Overload Relay.....	1

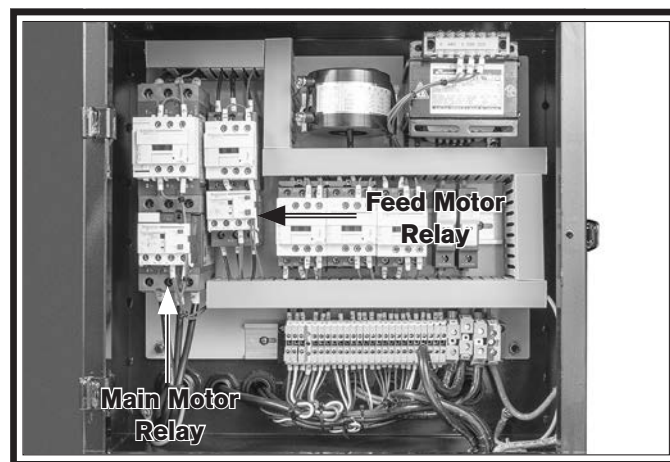
### To convert SB1096 for 440V operation:

1. DISCONNECT MACHINE FROM POWER!
2. Open electrical cabinet.
3. Remove wire labeled "1" at 220V terminal of control power transformer (see **Figure 27**) and connect it to 440V terminal.



**Figure 27. Location of "1" wire and terminals.**

4. Remove main motor overload relay, replace it with LR3D325 (17-25A) relay (see **Figure 28**), and set dial to 18A.
5. Remove feed motor overload relay, replace it with LR3D07 (1.6-2.5A) relay (see **Figure 28**), and set dial to 1.7A.



**Figure 28. Location of overload relays.**

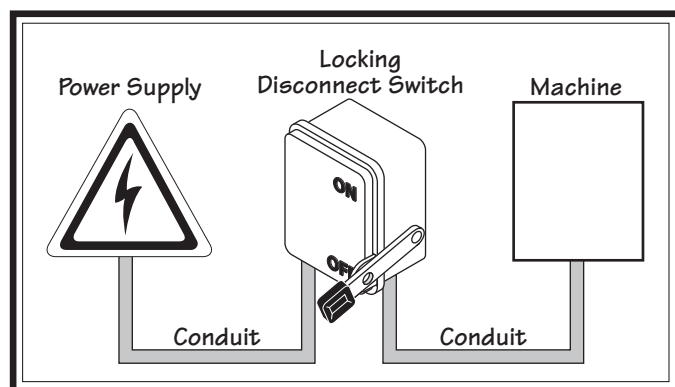
6. Wire sanding belt, conveyor belt, and table elevation motors as shown in diagrams starting on **Page 70**.
7. Close motor junction boxes and electrical cabinet before reconnecting power supply.

## Hardwiring to Power Supply

Hardwire setups require power supply lines to be enclosed inside of conduit, which is securely mounted and constructed in adherence to applicable electrical codes.

A hardwire setup for this machine must be equipped with a locking disconnect switch as a means to disconnect the power during adjustments or maintenance, which is a typical requirement for many lock-out/tag-out safety programs.

**Figure 29** shows a simple diagram of a hardwire setup with a locking disconnect switch between the power supply and the machine.



**Figure 29.** Typical hardwire setup with a locking disconnect switch.

Due to the complexity required for planning, bending, and installing the conduit necessary for a code-compliant hardwire setup, an electrician or other qualified person **MUST** perform this type of installation.

## Connecting Power Supply Wires to Machine

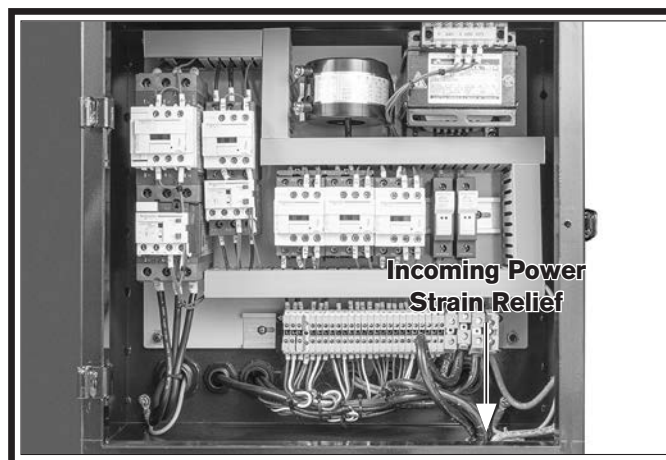
### ⚠ WARNING

Connecting power supply wires to machine without first disconnecting power supply may result in serious injury or death.

**To connect power supply wires to machine:**

1. DISCONNECT POWER SUPPLY WIRES OR LOCK DISCONNECT SWITCH BOX IN OFF POSITION!

2. Open the electrical cabinet.
3. Insert incoming power conduit through strain relief in electrical box (see **Figure 30**).

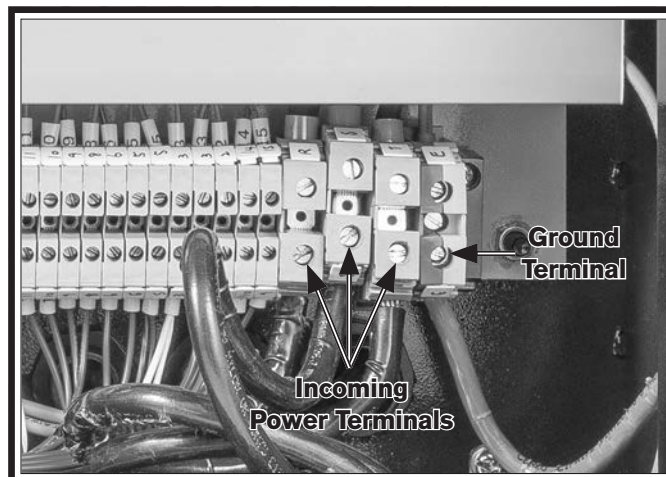


**Figure 30.** Location of power supply strain relief.

### ⚠ WARNING

During next step, make sure incoming ground wire is connected to correct terminal to ensure machine will be properly grounded (see "Ground Terminal" in **Figure 31**). An ungrounded or improperly grounded machine can cause electrocution if live electrical wires make contact with frame or other parts touched by operator.

4. Connect ground wire to bottom of ground terminal **E**, then connect incoming power wires to bottom "R", "S", and "T" terminals shown in **Figure 31**. If using a phase converter, connect wild wire to "T" terminal.



**Figure 31.** Incoming ground and power wire terminals.

- Make sure wires have enough slack inside electrical cabinet so they are not pulled tight or stretched.

5. Close electrical cabinet, connect power supply to machine, and proceed to **Test Run**.

## Correcting Phase Polarity

This sub-section is only provided for troubleshooting 3-phase power connections. If you discover during the test run that the machine will not operate, or that the motor runs backwards, the power supply connection may be wired "out of phase," meaning that the polarity is incorrect as wired. This is a common situation with 3-phase power, and it is easy to correct.

### To correct polarity of incoming power supply connection:

1. DISCONNECT MACHINE FROM POWER!
2. Open the electrical box and swap wires connected to "R" and "S" terminals (see **Figure 32**).

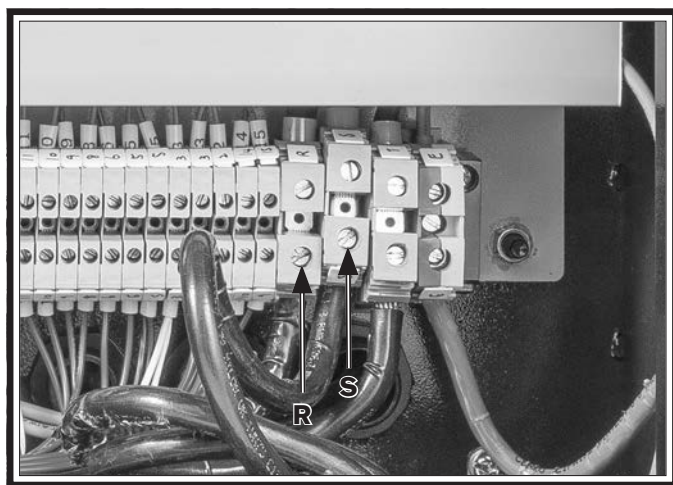


Figure 32. Location of "R" and "S" terminals.

3. Close and latch electrical box, and reconnect machine to power.
4. Follow **Test Run** to ensure that machine functions properly.

## Test Run

After all preparation steps have been completed, the machine and its safety features must be tested to ensure correct operation. If you discover a problem with the operation of the machine or its safety components, do not operate it further until you have resolved the problem.

**Note:** Refer to **Troubleshooting** on **Page 59** for solutions to common problems that occur with all wide-belt sanders. If you need additional help, contact our Tech Support at (360) 734-1540.

The test run consists of verifying the following:

- Sanding belt tensions when tension switch is turned **ON**.
- Power supply polarity is correct.
- Motors power up and run correctly.
- Emergency Stop button works correctly.
- EMERGENCY STOP! plate works correctly.

## ! WARNING

Serious injury or death can result from using this machine **BEFORE** understanding its controls and related safety information. **DO NOT** operate, or allow others to operate, machine until the information is understood.

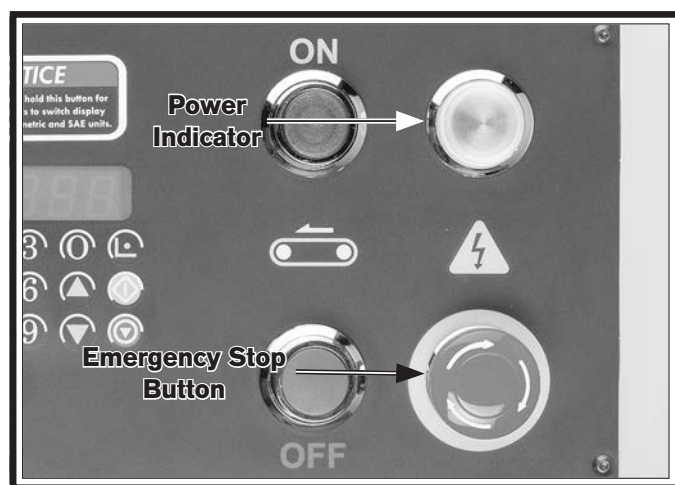
## ! WARNING

**DO NOT** start machine until all preceding setup instructions have been performed. Operating an improperly set up machine may result in malfunction or unexpected results that can lead to serious injury, death, or machine/property damage.



**To test run machine:**

1. Clear all setup tools away from machine.
2. Press Emergency Stop button in (see **Figure 33**).
3. Turn air compressor **ON** and verify pressure gauge on air regulator is set to approximately 75 PSI.
4. Connect machine to power. Power indicator should illuminate (see **Figure 33**).

**Figure 33. E-Stop button and power indicator.**

5. Twist Emergency Stop button clockwise until it springs out. This resets switch so machine can start.
6. Verify power supply is connected to machine with correct polarity by pressing Table Up (▲) and Table Down (▼) keys, respectively (see **Figure 34**).

**Figure 34. Table Up and Down key locations.**

- If table moves in same direction as key description, power supply polarity is correct.
- If table moves in opposite direction as key description, stop machine and DISCONNECT FROM POWER. Phase polarity of incoming power is reversed. Refer to **Correcting Phase Polarity** on **Page 24** before proceeding with remainder of Test Run.

**! WARNING**

**You MUST verify that table moves in expected direction according to buttons pressed on control panel, otherwise all controls will function in reverse. Conveyor and sanding belt MUST rotate in correct direction or serious personal injury and machine damage could occur.**

7. Press sanding belt ON button to turn main motor **ON** (see **Figure 35**). Verify motor starts up and runs smoothly without any unusual problems or noises.

**Figure 35. Sanding and conveyor belt ON buttons.**

8. Press Emergency Stop button to turn machine **OFF**.
9. WITHOUT resetting Emergency Stop button, try to start machine by pressing same start button from **Step 7**. The machine should not start.

- If machine *does not* start, safety feature of the Emergency Stop button is working correctly. Proceed to next step.
- If machine *does* start, immediately turn it OFF, disconnect power, and contact customer service for assistance. The safety feature of the Emergency Stop button is NOT working properly and must be replaced before further using machine.

10. Reset Emergency Stop button and repeat **Steps 7–9** with conveyor belt ON button (see **Figure 35**) to test feed motor. Motor should run smoothly without unusual problems or noises and belt should move away from operator and toward sanding drum.
11. Reset Emergency Stop button.
12. Press both sanding belt and conveyor belt ON buttons, then press EMERGENCY STOP plate (see **Figure 36**).



**Figure 36. EMERGENCY STOP plate location.**

- If sanding and conveyor belt *do not* come to a complete stop, immediately disconnect power. The safety feature of the EMERGENCY STOP plate is NOT working correctly. This must be fixed before machine can be used further.
- If sanding and conveyor belt *do* come to a complete stop, safety feature of the EMERGENCY STOP plate is working correctly.

Test Run is complete!

## Inspections & Adjustments

The following list of adjustments were performed at the factory before your machine was shipped:

- **Table Display Calibration .....Page 58**
- **Table Parallelism.....Page 47**
- **Conveyor Belt Tension.....Page 54**
- **Conveyor Belt Tracking.....Page 55**
- **Oscillation Timing.....Page 41**
- **Oscillation Speed.....Page 41**
- **Pressure Rollers .....Page 50**
- **V-Belt Adjustment .....Page 51**

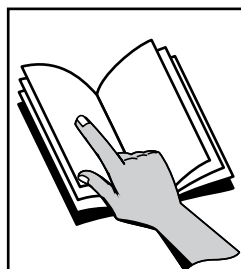
Be aware that machine components can shift during the shipping process. Pay careful attention to these adjustments as you test run your machine. If you find that the adjustments are not set according to the procedures in this manual or your personal preferences, re-adjust them.



## Operation Overview

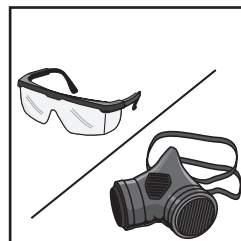
The purpose of this overview is to provide the novice machine operator with a basic understanding of how the machine is used during operation, so they can more easily understand the controls discussed later in this manual.

**Note:** Due to the generic nature of this overview, it is not intended to be an instructional guide for performing actual machine operations. To learn more about specific operations and machining techniques, seek training from people experienced with this type of machine, and do additional research outside of this manual by reading "how-to" books, trade magazines, or websites.



### **WARNING**

To reduce the risk of serious injury when using this machine, read and understand this entire manual before beginning any operations.



### **WARNING**

To reduce risk of eye injury from flying chips or lung damage from breathing dust, always wear safety glasses and a respirator when operating this machine.

## **NOTICE**

If you are not experienced with this type of machine, **WE STRONGLY RECOMMEND** that you seek additional training outside of this manual. Read books/magazines or get formal training before beginning any projects. Regardless of the content in this section, South Bend Lathe Company will not be held liable for accidents caused by lack of training.

To complete a typical operation, the operator does the following:

1. Examines the workpiece to verify it is suitable for sanding and determines which sanding belt grit size to start with.
  2. Installs and tensions sanding belts. Adjusts platen as necessary.
  3. Checks pressure regulator setting is between 57-75 PSI.
  4. Verifies outfeed clearance and support.
  5. Adjusts conveyor table height to approximate thickness of workpiece.
  6. Puts on safety glasses and respirator.
  7. Starts dust collector.
  8. Connects machine to power, starts sanding belt motor, then starts feed motor.
  9. Feeds workpiece into sander by placing front end on infeed side of conveyor table and supporting back end until workpiece engages with pressure rollers.
- Note:** During initial pass with new workpiece, operator adjusts table height as necessary so workpiece only makes light contact with sanding belt and does not overload sander.
10. Receives workpiece from outfeed side of conveyor table.
  11. Raises height of conveyor table a small amount, then repeats feeding process of workpiece through sander.
  12. Changes sandpaper to finer grit.
  13. Repeats **Steps 9–12** as needed, turns all motors **OFF**, disconnects machine from power, then turns **OFF** air compressor once machine is at rest.

## Sanding Workpieces

The sanding process is influenced by the feed rate, sanding depth, grit size and material type of sandpaper, platen position, and oscillation speed. We strongly recommend that you experiment with these variables, or research best practices for achieving your desired sanding results with the type of material you have. Also, to avoid unnecessary wear on belts, always make sure the workpiece has been surface planed with a jointer or planer before sanding.

Typically, no more than 0.020" (one full rotation of handwheel) of material should be removed during a single sanding pass. The maximum sanding depth can also be influenced by the thickness of the sanding belt, which can vary from 0.010" (fine sandpaper) to 0.060" (coarse sandpaper).

Attempts to remove too much material at one time can cause jamming, wood burning, rapid sandpaper wear or tearing, poor finish, short motor life, and belt slippage. The operator usually makes a pass, raises the table a little, and repeats until the entire surface is sanded to satisfaction. Before sanding, ensure you review **Workpiece Inspection** and put on the required safety glasses and respirator.

**Note:** *It may take more than one pass to achieve the full sanding depth.*

The overall sanding process consists of the operator starting sanding with the platen in the up position with a coarse grit sandpaper, such as #60, and then repeating this for subsequent grit sizes from #80–#100 until the workpiece is evenly smooth. The operator then sets the platen level with the drum and performs intermediate sanding passes using #100–#150 grit sandpaper. For the final sanding pass, the operator sets the platen in the down position and sands the workpiece using #180 grit or finer sandpaper. Refer to **Adjusting Platen** on **Page 32** for more information about platen positions.

**IMPORTANT:** *As you sand, observe the amp meter (see **Figure 1** on **Page 3**). If the load meter indicates motor overload, slightly lower the table or reduce the feed rate.*

### Use the following tables to determine the approximate maximum depth-of-cut (DOC) for relative conveyor feed rates.

After selecting the appropriate feed rate chart, find the grit size you plan to use. Locate the correct DOC for that grit by selecting the correct wood hardness of the workpiece, and note the maximum DOC for the platen setting (up, even, or down).

**Note:** *These numbers are approximate values only. They are provided with the intent of giving you a "ballpark" idea of what to expect for material removal rates from this machine. Many additional factors can influence the maximum depth-of-cut or removal rates that can be achieved with each pass (i.e. oscillation speed settings, depth-of-cut taken on previous pass, actual hardness of workpiece, etc.), so don't be surprised if you experience slightly different results.*

**Approximate Max Depth-of-Cut for 15" Stock****16 FPM**

Grit Size	Wood Hardness		Platen Settings	
	Hard	Soft	Max DOC	Position
60	0.030"	0.040"	n/a	Up 1.5mm
80	0.025"	0.035"	n/a	Up 1.5mm
100	0.020"	0.030"	0.010"	Even
120	*0.015"	*0.020"	0.010"	Even
150	*0.010"	*0.015"	0.007"	Even
180	0.005"	*0.010"	0.005"	Down 0.5mm
240	*0.003"	*0.005"	0.002"	Down 1mm

**23 FPM**

Grit Size	Wood Hardness		Platen Settings	
	Hard	Soft	Max DOC	Position
60	0.025"	0.035"	n/a	Up 1.5mm
80	0.020"	0.030"	n/a	Up 1.5mm
100	0.015"	0.020"	0.007"	Even
120	*0.010"	*0.015"	0.007"	Even
150	0.005"	*0.010"	0.005"	Even
180	*0.003"	*0.005"	0.002"	Down 0.5mm
240	*0.002"	*0.004"	0.001"	Down 1mm

**33 FPM**

Grit Size	Wood Hardness		Platen Settings	
	Hard	Soft	Max DOC	Position
60	0.020"	0.030"	n/a	Up 1.5mm
80	0.015"	0.025"	n/a	Up 1.5mm
100	0.010"	0.015"	0.005"	Even
120	*0.007"	*0.010"	0.005"	Even
150	*0.005"	*0.007"	0.003"	Even
180	*0.003"	*0.005"	0.002"	Down 0.5mm
240	0.001"	*0.003"	0.001"	Down 1mm

\* These numbers assume the platen is raised up during the sanding pass.

# Workpiece Inspection

Some workpieces are not safe to cut or may require modification before they are safe to cut.

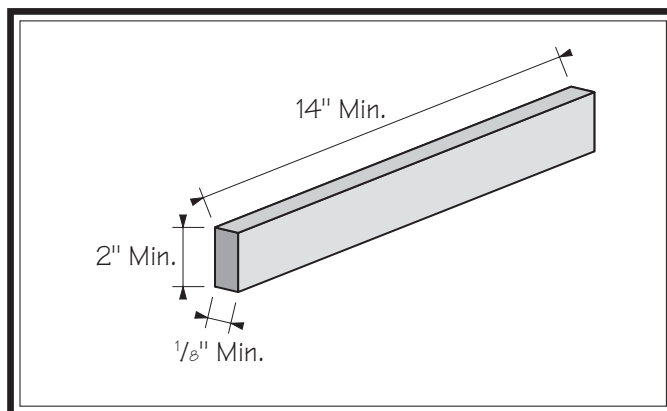
**Before sanding, inspect all workpieces for the following:**

- Material Type:** This machine is intended for sanding natural and man-made wood products. This machine is NOT designed to sand metal, glass, stone, tile, plastics, drywall, cement backer board, laminate products, etc.
- Sanding improper materials increases risk of respiratory harm to operator and bystanders due to especially fine dust inherently created by all types of sanding operations—even if a dust collector is used. Additionally, life of machine and sanding belts will be greatly reduced (or immediately damaged) from sanding improper materials or from exposure to fine dust created when doing so.
- Foreign Objects:** Nails, staples, dirt, rocks and other foreign objects are often embedded in wood. While sanding, these objects can become dislodged and tear sanding belt. Always visually inspect your workpiece for these items. If they cannot be removed, DO NOT sand the workpiece.
- Wet or "Green" Stock:** Sanding wood with a moisture content over 20% causes unnecessary clogging and wear on the sanding belt, increases the risk of kickback, and yields poor results.
- Excessive Warping:** Workpieces with excessive cupping, bowing, or twisting can be dangerous to sand because they are unstable and unpredictable when being sanded. DO NOT use workpieces with these characteristics!
- Minor Warping:** Workpieces with slight cupping can be safely supported if the cupped side is facing the table. On the contrary, a workpiece supported on the bowed side will rock during sanding and could cause kickback injury.

## Sanding Tips

- Avoid sanding a workpiece more than is necessary, since doing so will unnecessarily decrease belt life and cost you more money over time.
- Only sand with as slow of feed speeds as necessary to meet your sanding goals. In other words, avoid running the sander faster than is necessary. Increasing feed speeds beyond the required level can decrease the quality of the finished product and the lifespan of sanding belts.
- As a general rule, use the sanding drum for the initial heavy sanding pass, then use a combination of the platen and drum for the intermediate pass, and the platen alone for the final sanding passes.
- As a rule-of-thumb, sand with progressively higher grit numbers in increments of 50 or less.
- Replace sandpaper with a higher grit to achieve a finer finish (refer to **Installing/Changing Sanding Belts** on **Page 31**).
- When making multiple passes on the workpiece, avoid raising the conveyor table more than 0.015" (nearly one turn of the height handle or 3 touches of the Table Up key) per each pass.
- Reduce snipe when sanding more than one board of the same thickness by feeding them into the machine with the front end of the second board touching the back end of the first board (aka "Butt Feeding").
- Feed boards into the machine at different points on the conveyor to maximize sandpaper life and prevent uneven belt wear.

- DO NOT sand boards smaller than 14" long, 2" wide and  $\frac{1}{8}$ " thick to prevent damage to the workpiece and the sander (see **Figure 37**).



**Figure 37. Minimum dimensions for sanding.**

- Extend the life of the sandpaper by regularly cleaning the sanding belt (refer to **Cleaning Sanding Belt** on **Page 40**).
- DO NOT edge-sand boards. This can cause boards to kickback, causing serious personal injury, or damage to the conveyor and sanding belt.
- Only use the load meter to keep the motor from overloading—that is its main purpose. Avoid using the load meter to monitor how much material is being removed, as this can lead to problems, including belts loading, burning, and poor quality sanding results.
- Make sure to adjust platen position accordingly when changing grit sizes.
- The faster the feed rate you use, the faster your sanding belts will wear out.

# Installing/Changing Sanding Belts

**Required Sanding Belt Size..... 37" x 60"**

<b>Included 37" x 60" Belts</b>	<b>Qty.</b>
100-Grit .....	1
180-Grit .....	1

The Model SB1096 only accepts 37" wide by 60" long sanding belts. For additional sanding belt selections beyond those included with the machine, refer to **Accessories** on **Page 35**.

**We recommend using aluminum-oxide sanding belts for best results.** The grit you choose will depend on the condition and species of wood, and the level of finish you wish to achieve.

**When choosing sanding belts, use these grit numbers as a general guide:**

<b>Grit</b>	<b>Type</b>
60 or less .....	Course
80–100.....	Medium
120–150.....	Fine
180+ .....	Finish

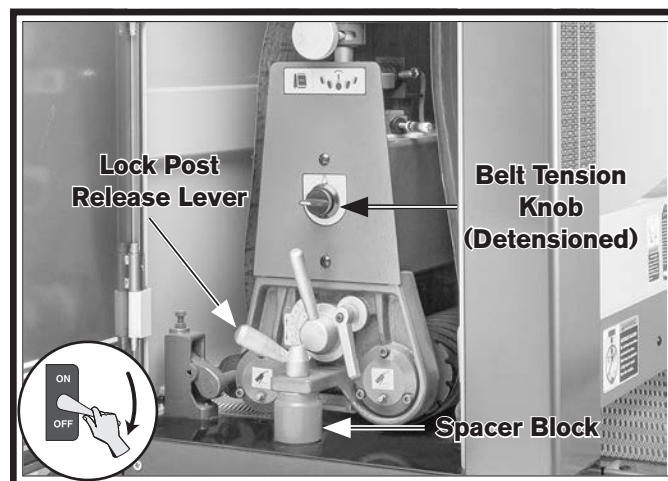
The general rule of thumb is to sand a workpiece with progressively higher grit numbers—in increments of 50 or less.

**Note:** Sandpaper finer than 180-grit will easily load up or burn workpieces.

## To install/change sanding belt:

1. Start air compressor.
2. DISCONNECT MACHINE FROM POWER.
3. Open left door.

4. Rotate sanding belt tension knob to release sanding belt tension (see **Figure 38**).
5. Loosen lock post release lever and remove it and spacer block (see **Figure 38**).



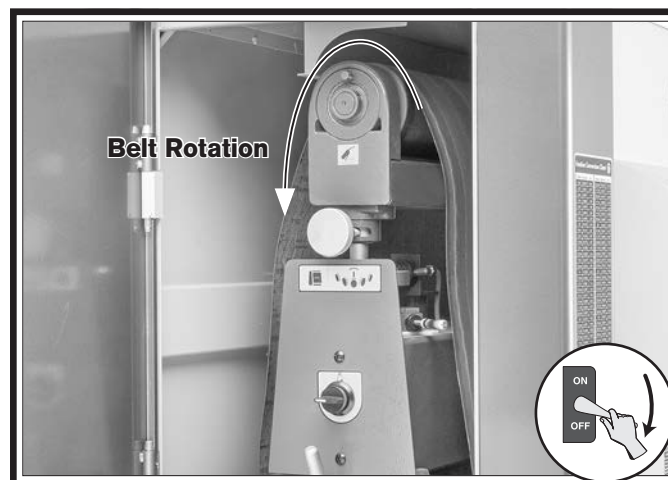
**Figure 38. Components for changing sanding belt.**

6. Remove existing belt.

## NOTICE

**You must install sanding belt with directional arrows on sanding belt pointing in counterclockwise direction (from left door position). Failure to install sanding belt correctly could result in damage to sanding belt or machine itself.**

7. Making sure rotation arrows on sanding belt point in same direction as those shown in **Figure 39**, install sanding belt on upper roller and lower roller, starting with upper.



**Figure 39. Sanding belt placement components.**



**Note:** Sanding belt must be centered between limit switches on either side, as shown in **Figure 40**, before belt is tensioned. Damage to sanding belt and sander may occur if sander is turned **ON** before sanding belt is correctly positioned.

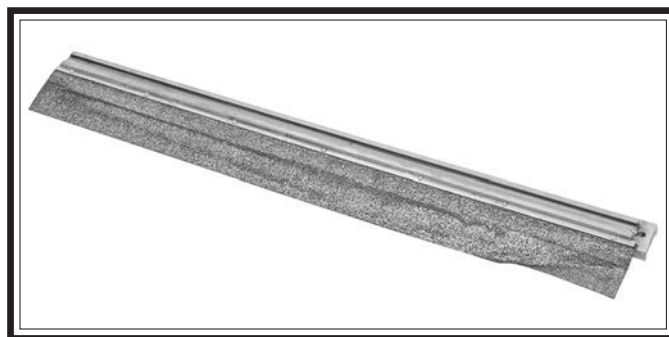


**Figure 40. Location of sanding belt limit switches.**

8. Replace spacer block and lock post release lever.
9. Keeping hands clear of moving parts, tension belt by rotating belt tension knob to vertical position.
10. Close and secure left door.

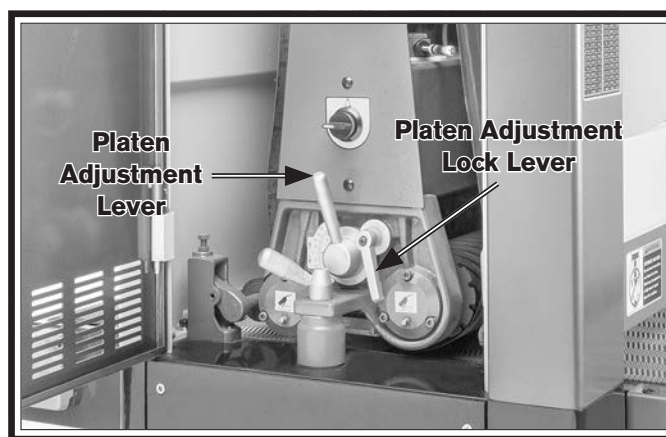
## Adjusting Platen

This sander is equipped with an adjustable platen (see **Figure 41**) with a graphite pad that is designed to be used during finish sanding to create a polished-type finish and to prepare the workpiece for orbital sanding or a finish coat.



**Figure 41. Platen removed from machine.**

The platen position allows for 3 basic types of sanding: up, even, and down, which is adjusted with the platen adjustment lever (see **Figure 42**) to the desired position. The platen adjustment lock lever must be unlocked to adjust the platen.



**Figure 42. Platen height components.**

Unlike the sanding drums, which typically produce short but deep scratch patterns, the platen produces long and shallow scratch patterns that create a smoother finish. Due to the cushioned-construction, the platen is less likely to leave belt-splice or chatter marks.

However, we do not recommend lowering the platen depth more than 2mm (about one complete turn of the lever) or over-using the platen by expecting it to remove marks beyond its ability to do so, since this can reduce the life of the sanding belt and platen, and result in premature streaking.

**Tip:** *Given the short life-span of most graphite pads, keep replacement pads on hand.*

**Platen Up:** The platen is raised above the drum (typically set at 1.5mm up), so only the sanding drum is making contact with the workpiece. This position is typically used for heavy sanding passes or dimensioning. The drum does all the work, but you will have a rough finish. Typically platens are used in this position with #100 or coarser grit.

**Platen Even:** The platen is set level with the drum. This position is used for intermediate-finishing passes. The depth of cut should not exceed 0.010". This position typically uses #100-#150 grit.

**Platen Down:** The platen is set below the drum so it is the primary contact point while performing finish sanding.

The platen should be lowered to 0.2 to 0.5mm (maximum) below the sanding drums, but not more than 0.2mm per pass. You can lower the platen up to 2 mm below the drums for short intervals, but streaking, burn marks, and premature graphite/platen wear can occur if this setting is abused or over-used.

It is not necessary to use the table height handwheel or Table Up key to adjust the sanding depth during the final sanding pass—the platen movement alone will take care of the depth of cut. Typically the final-sanding pass position uses #180 or finer grit.

**Note:** *The platen scale is broken down in millimeter increments.*

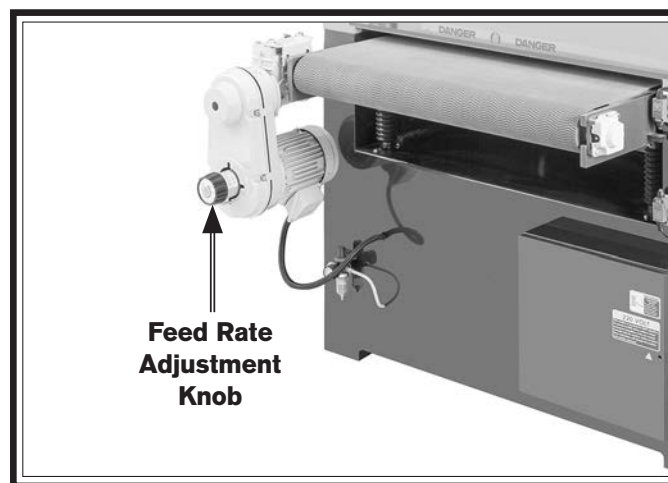
## NOTICE

**If workpiece has straight notches across it, graphite cloth and felt have worn out and need to be replaced.**

## Changing Feed Rate

The conveyor belt is variable-speed, which is controlled by the knob located on the front of the feed belt gearbox (see **Figure 43**).

**Conveyor Speed Rate..... 15–49 FPM**



**Figure 43. Feed rate adjustment knob location.**

As a general rule, slower feed rates are more beneficial than faster feed rates since they allow a belt to remove more material. We recommend you always start with the slowest feed rate and only increase the feed speed as needed to meet your sanding goals. Always test the feed rate using scrap wood similar to your workpiece.

Softwoods typically require a faster feed rate than hardwoods; however, there is no definitive rule to follow when determining the best feed rate to use for any type of wood.

Also, keep in mind that an increase in feed rate will increase the amperage load for a given sanding depth. This means you need to use shallower sanding depths at higher feed rates to avoid overloading the sanding motor.

### To change feed rate:

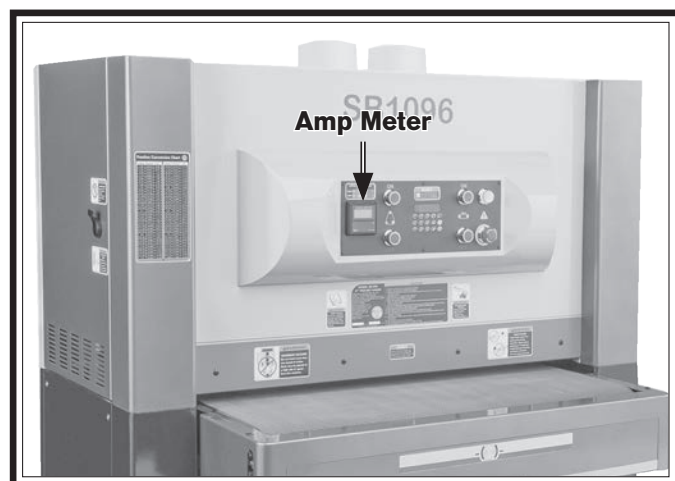
1. Turn conveyor belt **ON**. Conveyor belt must be running to adjust feed rate.
2. Turn knob counterclockwise to increase feed rate. Turn knob clockwise to decrease feed rate.

**Note:** *Turn knob in 1/8" increments.*

## Reading Amp Meter

The amp meter (see **Figure 44**) is used to keep the motor from overloading during sanding operations. It should not be used as the main method for controlling sanding belt material removal rates—doing so can result in belt loading, burning, and even breaking—because there are many different variables that affect optimum removal rates and these will affect the amp load in different ways.

Amp load is directly affected by many factors such as feed rate, depth of cut, wood type, sandpaper grit, and workpiece width. If the amp load is in the red load range, the machine is overloaded and motor damage may soon occur. Adjust the table height accordingly to reduce the load, and use the amp load chart near the meter to keep the amp load in the green, SAFE range during operation.



**Figure 44. Location of amp meter.**

As a general rule, always start with a small load and work your way up. **DO NOT** work the machine to its maximum load, or to where you can hear the motor lose RPM; instead, make multiple light passes or install a coarser grit sandpaper.

### NOTICE

Keep amp draw within **GREEN** load range shown on the **AMP LOAD CHART** on the control panel. If you operate machine in **RED** load range, motor damage may occur and will not be covered under warranty.

## Using EMERGENCY STOP Plate

The EMERGENCY STOP plate can help reduce the amount of damage to internal components during an emergency and can prevent operator injury. Pushing the EMERGENCY STOP plate (see **Figure 45**) causes the disc brake to stop the sanding belt motor, immediately stopping the sanding belt.



**Figure 45. Location of EMERGENCY STOP plate.**

An operator should be careful when loading a workpiece not to trap fingers between workpiece and conveyor table, but in the event that it might happen, the EMERGENCY STOP plate can be pressed by operator while their hands are otherwise engaged.

### ! CAUTION

Keep sanding drum V-belt correctly tensioned (refer to Page 51) to ensure proper functionality of EMERGENCY STOP plate. Otherwise, pulleys can slip when emergency stop brake is applied and not immediately stop the machine in the event of an emergency!.

## Accessories

This section includes the most common accessories available for your machine through our exclusive dealer, Grizzly Industrial, Inc., at [grizzly.com](http://grizzly.com).

### **!WARNING**

Installing unapproved accessories may cause machine to malfunction, resulting in serious personal injury or machine damage. To reduce this risk, only install accessories recommended by South Bend or Grizzly.

### **NOTICE**

Refer to Grizzly's website or latest catalog for additional recommended accessories.

#### **D3378—Pro-Stik 12" x 15" Cleaning Pad**

#### **D3003—Pro-Stik 15" x 20" Cleaning Pad**

The perfect accessory for wide-belt sanders, just set your table and feed this cleaning pad through for longer lasting abrasive belts. Pads are  $\frac{3}{4}$ " thick.



Figure 46. PRO-STIK cleaning pad.

#### **D2274—5 Roller Stand**

Adjusts from 26" to 44 $\frac{5}{8}$ ". 250 lb. capacity.

These super heavy-duty roller stands feature convenient hand knobs for fast height adjustment.



Figure 47. D2274 5-Roller Stand.

#### **T26419—Syn-O-Gen Synthetic Grease**

Formulated with 100% pure synthesized hydrocarbon basestocks that are compounded with special thickeners and additives to make Syn-O-Gen non-melt, tacky, and water-resistant. Extremely low pour point, extremely high temperature oxidation, and thermal stability produce a grease that is unmatched in performance.



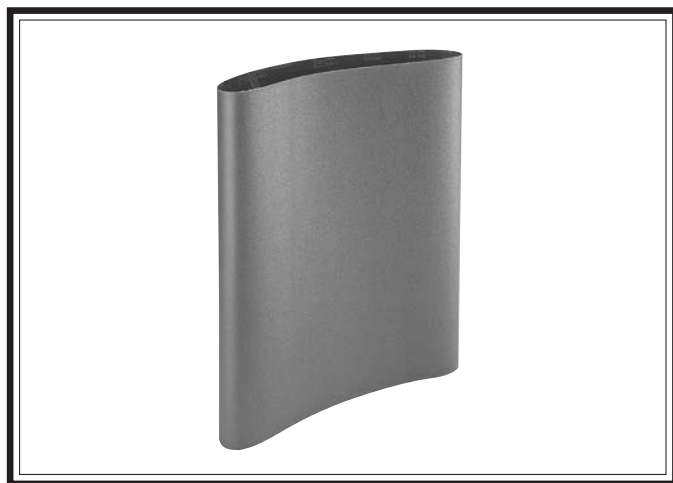
Figure 48. T26419 Syn-O-Gen Synthetic Grease.

order online at [www.grizzly.com](http://www.grizzly.com) or call 1-800-523-4777

## **Sanding Belts 37" x 60"** **X-Weight Aluminum Oxide**

**T21042—60-Grit**  
**T21043—80-Grit**  
**T21044—100-Grit**  
**T21045—120-Grit**  
**T21046—150-Grit**  
**T21092—60-Grit (5-Pk.)**  
**T21093—80-Grit (5-Pk.)**  
**T21094—100-Grit (5-Pk.)**  
**T21095—120-Grit (5-Pk.)**  
**T21096—150-Grit (5-Pk.)**

These belts feature touch aluminum oxide grain on an "X" weight paper backing. This product has more "body" than other "X" weight products, making it well-suited for wide belts. While it will not take the abuse of the "Y" weight aluminum oxide belts, the do-it-yourselfer will find it affordable and effective.

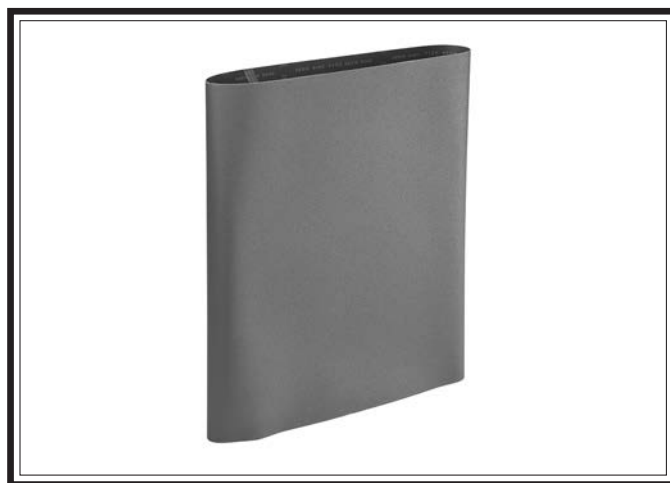


**Figure 49. 37" x 60" X-Weight Sanding Belts.**

## **Sanding Belts 37" x 60"** **Y-Weight Aluminum Oxide**

**G7998—60-Grit**  
**G7999—80-Grit**  
**G8000—100-Grit**  
**G8001—120-Grit**  
**G8002—150-Grit**  
**H8817—60-Grit (3-Pk.)**  
**H8818—80-Grit (3-Pk.)**  
**H8819—100-Grit (3-Pk.)**  
**H8820—120-Grit (3-Pk.)**  
**H8821—150-Grit (3-Pk.)**

These belts use tough aluminum oxide grain, open-coated on a very heavy "Y" weight polyester backing with a Resin Bond system that no equivalent product can outperform. The superior backing more than justifies the additional cost over lesser "X" weight backings in their longer belt life and their ability to be washed, furthering the savings.

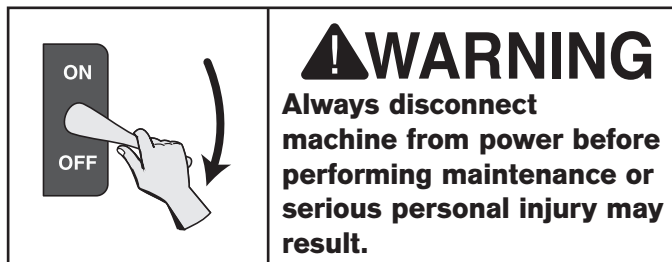


**Figure 50. 37" x 60" Y-Weight Sanding Belts.**

***order online at [www.grizzly.com](http://www.grizzly.com) or call 1-800-523-4777***



# Maintenance Schedule Machine Storage



For optimum performance from your machine, follow this maintenance schedule and refer to any specific instructions given in this section.

To minimize your risk of injury and maintain proper machine operation, shut down the machine immediately if you ever observe any of the items below, and fix the problem before continuing operations:

## Ongoing

- Check for/tighten loose mounting bolts.
- Check for/replace worn or damaged sanding belts.
- Check for/repair worn or damaged wires.
- Check for/replace worn or damaged platen graphite pad.
- Check for any other unsafe condition.

## Weekly

- Drain water in air filter collection cup (**Page 40**).
- Empty and clean dust trap bowl (**Page 40**).
- Lubricate grease fittings on conveyor belt roller axles and sanding belt axles (**Page 38**).

## Monthly

- V-belt tension, damage, or wear.
- Clean/vacuum dust build-up from inside cabinet and off motors.
- Check gearbox sight glass for oil level, if oil is below sight glass, fill (**Page 39**).
- Grease table elevation chain, leadscrews, and sprockets (**Page 39**).

## Yearly

- Replace white moisture filters in air regulator.

All machinery will develop serious rust problems and corrosion damage if it is not properly prepared for storage. If decommissioning this machine, use the steps in this section to ensure that it remains in good condition.

## To prepare machine for storage or decommission it from service:

1. Disconnect all power sources to machine.
2. Thoroughly clean all unpainted, bare metal surfaces, then coat them with light weight grease or rust preventative. Take care to ensure these surfaces are completely covered but that grease or rust preventative is kept off of painted surfaces.

**Note:** *If machine will be out of service for only a short period of time, use way oil or a good grade of medium-weight machine oil (not auto engine oil) in place of grease or rust preventative.*

3. Loosen or remove belts so they do not become stretched while machine is not in use.
4. Fill gearbox with recommended gear oil so components above normal oil level do not develop rust. (Make sure to put a tag on controls as a reminder for re-commissioning process to adjust gear oil level before starting machine.)

**Note:** *If machine will be out of service for only a short period of time, start machine once a week and run all gear-driven components for a few minutes. This will put a fresh coat of gear oil on gearing components inside gearbox.*

5. Completely cover machine with tarp or plastic sheet that will keep out dust and resist liquid or moisture. If machine will be stored in/near direct sunlight, use cover that will block sun's rays.

## Cleaning & Protecting

Cleaning the Model SB1096 is relatively easy. Vacuum excess wood chips and sawdust, and wipe off the remaining dust with a dry cloth. If any resin has built up, use a resin dissolving cleaner to remove it.

## Lubrication

An essential part of lubrication is cleaning the components before lubricating them. This step is critical because dust and chips build up on lubricated components, which makes them hard to move. Simply adding more grease to built-up grime will not result in smooth moving parts. Clean the components in this section with an oil/grease solvent cleaner or mineral spirits before applying lubrication.

All other bearings are sealed and permanently lubricated. Leave them alone until they need to be replaced.

**The following are the main components that need to be lubricated:**

- Grease Fittings
- Table Elevation Leadscrews, Chain, and Sprockets
- Feed Motor Gearbox

Schedules are based on average use. Adjust lubrication frequency according to your level of use.

**DISCONNECT POWER TO MACHINE  
BEFORE CLEANING AND LUBRICATING  
COMPONENTS!**

## Grease Fittings

Lubrication Type.....T26419 or NLGI#2 Equiv.  
Amount .....1–2 Pumps from Grease Gun  
Frequency .....Weekly

### Items Needed

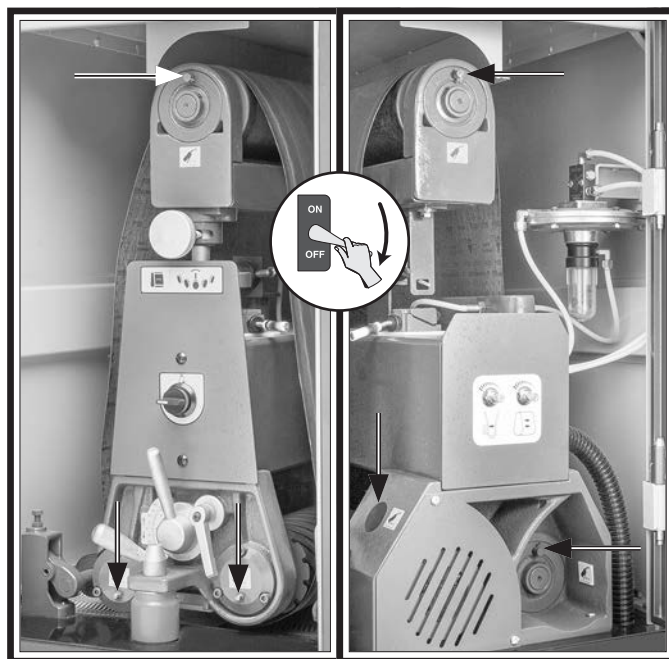
### Qty

Rag .....1  
Grease Gun.....1

Wipe the fitting clean with a rag. Add one or two pumps of grease to the grease fitting located on the conveyor belt roller axles and the sanding belt roller axles (see **Figures 51** and **52**). They are identified with yellow labels.



**Figure 51. Location of conveyor belt roller axle grease fitting.**



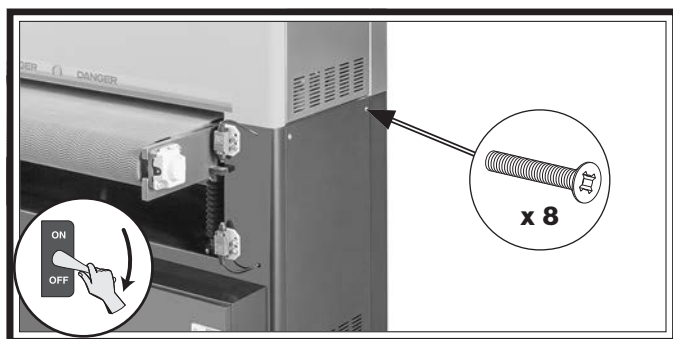
**Figure 52. Locations of sanding belt roller axle grease fittings.**

## Table Elevation Leadscrews, Chain, & Sprockets

Lubrication Type.....T26419 or NLGI#2 Equiv.  
Amount ..... Thin Coat  
Frequency ..... Monthly

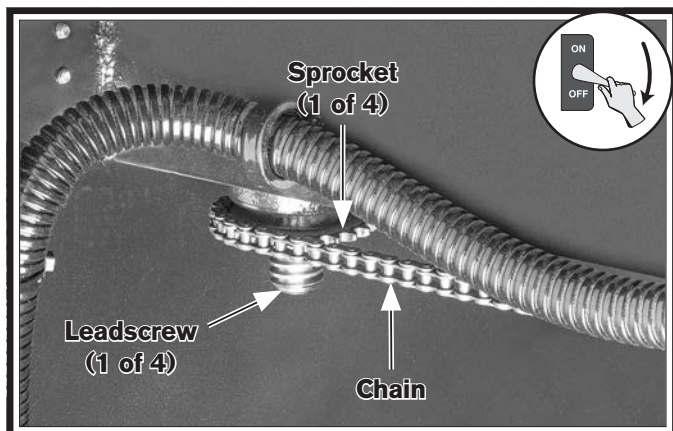
Items Needed	Qty
Rag .....	1
Mineral Spirits .....	As Needed
Wire Brush .....	1

Lower table all the way, then remove the flat head screws shown in **Figure 53** to remove each access panel.



**Figure 53. Location of securing flat head screws.**

Use shop rags and mineral spirits to remove the old lubricant and built-up grime from the leadscrews, chain, and sprockets (see **Figure 54**). Brush new lubricant onto the leadscrews, chain, and sprockets, being careful to not get grease on the V-belts. This could cause the V-belts to slip on the pulleys. If you do get grease on the V-belts, replace them. Raise the table up and down a few times to evenly distribute the lubricant.



**Figure 54. Table elevation lubrication components.**

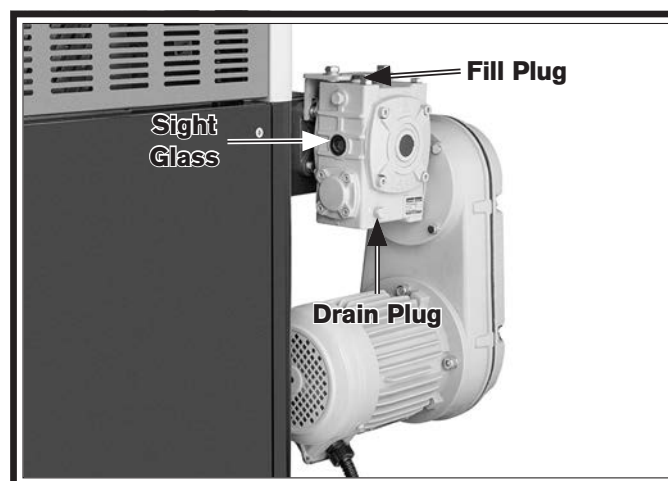
## Feed Belt Gearbox

Gear Oil Type ..... T28042 or ISO-VG 320 Equiv.  
Amount ..... As Needed  
Frequency ..... After first 300 hrs., every 2500 hrs.

Items Needed	Qty
Drain Pan .....	1
Wrench 14mm .....	1

If gearbox oil is low, remove fill plug (see **Figure 55**) and add new oil until sight glass is full, then re-install fill plug.

If gearbox oil needs to be changed, run machine to warm gearbox before removing fill plug and drain plug (see **Figure 55**), draining oil, then re-installing drain plug. Add new oil until sight glass is full, then re-install fill plug.



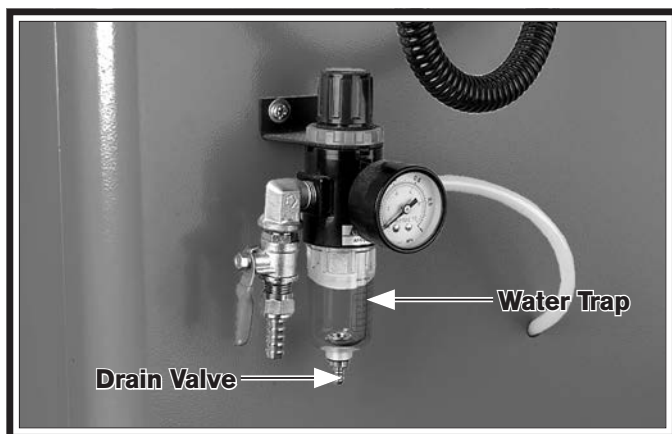
**Figure 55. Gearbox lubrication components.**

## Emptying Dust and Water Traps

Two collection traps on this sander need to be emptied regularly. **DO NOT** allow any of these traps to become full or you risk serious damage to the machine.

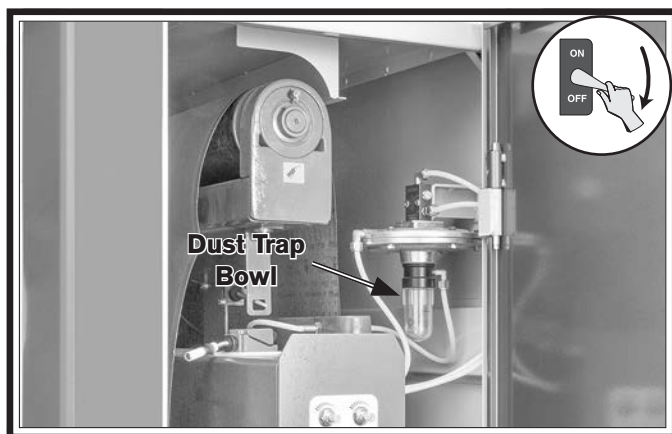
The air pressure regulator water trap (see **Figure 56**) is attached to the air pressure regulator and traps condensation in the incoming air supply.

With the system under air pressure, push the lower drain valve and empty the regulator water trap (see **Figure 56**). Also, replace the internal white moisture filters annually.



**Figure 56.** Location of regulator water trap and drain valve.

There is a dust trap bowl inside the right door (see **Figure 57**). To empty this bowl, turn the air pressure **OFF**, allow the pressure to bleed out, then unscrew and empty the bowl.



**Figure 57.** Location of dust trap bowl.

## Cleaning Sanding Belt

To increase the working life of your sanding belts, clean them whenever they decrease in performance due to heavy loading of material. Use a Model D3003 PRO-STIK® Cleaning Pad as shown in **Figure 58**.



**Figure 58.** PRO-STIK cleaning pad in use.

### To clean sanding belt:

1. Set table to thickness of cleaning pad.
2. Run pad through sander two or three times. **DO NOT** take too deep of a cut—belt should barely touch cleaning pad.

## Pneumatic System

The air system is durable and reliable; however, components do wear with age. If you suspect that an item in your air system may be having problems, see the **Pneumatic System Diagram** on **Page 62**.

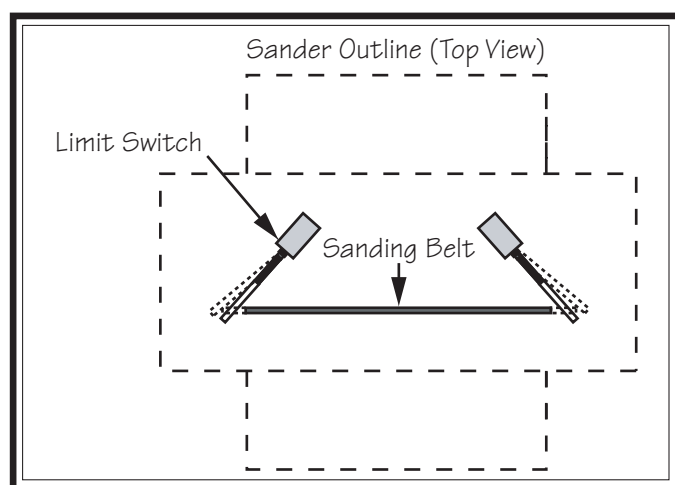
- Adjust regulator to approximately 75 PSI.
- Carefully inspect all air lines for cracks, chafing, or hardening. Replace faulty hoses.
- Check air connections for leaks. A small amount of soapy water in a questionable area will bubble if there is a leak.
- Make sure lines are not clogged. Remove a questionable line and blow through it as a test.



# Adjusting Oscillation Timing & Speed

The oscillation adjustments have been performed at the factory and should require no further attention. However, we recommend verifying the settings.

When the oscillation is correctly adjusted, the sanding belt oscillates to the left and to the right at the same speed. If the sanding belt makes contact with a limit switch, as shown in **Figure 59**, the emergency braking system will activate and stop the sander immediately.



**Figure 59. Improper oscillation.**

## ⚠ CAUTION

These adjustments should be made with care, as current sanding belt oscillation and timing settings can only be observed when the doors are open and the sanding belts are moving.

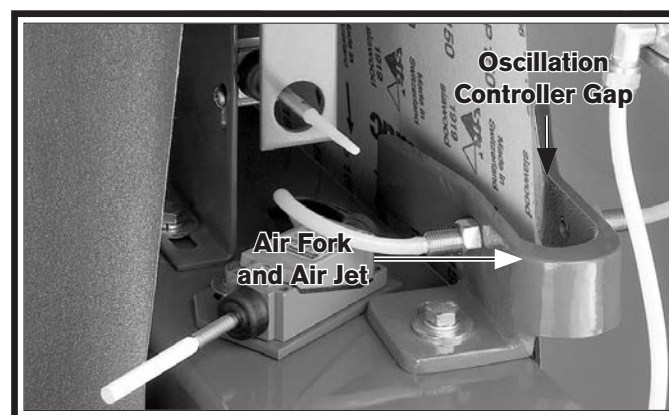
## Checking Sanding Belt Oscillation

1. Confirm sanding belt is properly installed and belt tension knob and air supply are **ON**.
2. Turn sanding belt **ON**.
  - If belt oscillates without contacting limit switches, but oscillation time to left and right is not equal, proceed to **Equalizing Oscillation Speed** on Page 42.

— If belt tracks away from air fork and air jet, colliding into limit switch, proceed to **Setting Correct Airflow**.

## Setting Correct Airflow

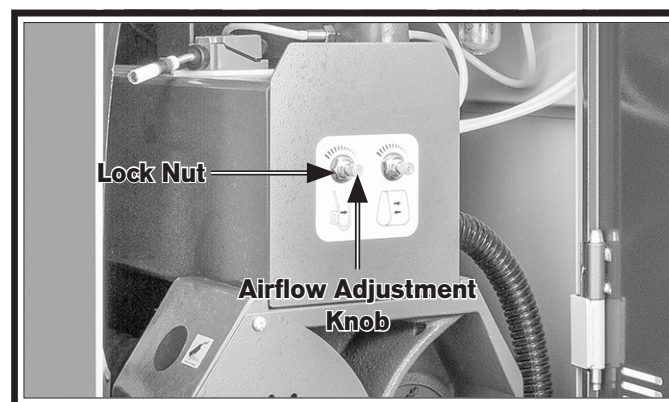
An adequate stream of air through the air fork gap is essential for proper oscillation (see **Figure 60**). If airflow is weak through the gap, the belt will track away from the controller and into the limit switch on the opposite end of the roller. The pivot action of the upper roller and the resulting oscillation of the belt are dependent upon adequate airflow through the air fork gap.



**Figure 60. Oscillation components.**

### To set correct airflow through air fork:

1. With sanding belt removed, turn belt tension knob to tensioned position.
2. Loosen lock nut on airflow adjustment knob (see **Figure 61**).
3. Turn airflow adjustment knob (see **Figure 61**) clockwise until airflow is completely **OFF**. Upper roller should pivot to the right.



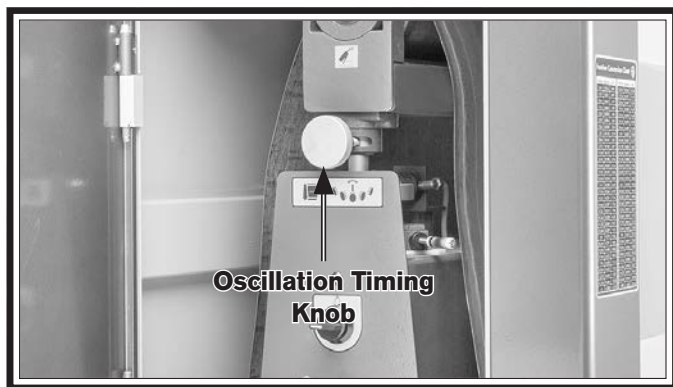
**Figure 61. Airflow adjustment components.**



4. Slowly turn airflow adjustment knob counterclockwise, and continue turning up air pressure until roller pivots left.
5. Tighten lock nut to secure airflow adjustment knob.
6. Restrict airflow across air fork gap with piece of cardboard. Roller should pivot to the right. When cardboard is removed, roller should pivot back to the left.
7. Proceed to **Equalizing Oscillation Speed** to ensure oscillation speed from left to right and right to left are the same.

## Equalizing Oscillation Speed

1. Test oscillation by running sander. Make note of time it takes for belt to oscillate from left to right and from right to left. When correctly timed, oscillation should take similar amount of time to move in each direction.
  - If oscillation time to the **left** is longer than time to the **right**, loosen oscillation timing knob (see **Figure 62**) and move it left until proper tracking is achieved. Tighten down knob when satisfied.
  - If oscillation time to the **right** is longer than to the **left**, loosen oscillation timing knob (see **Figure 62**) and move it right until proper tracking is achieved. Tighten down knob when satisfied.



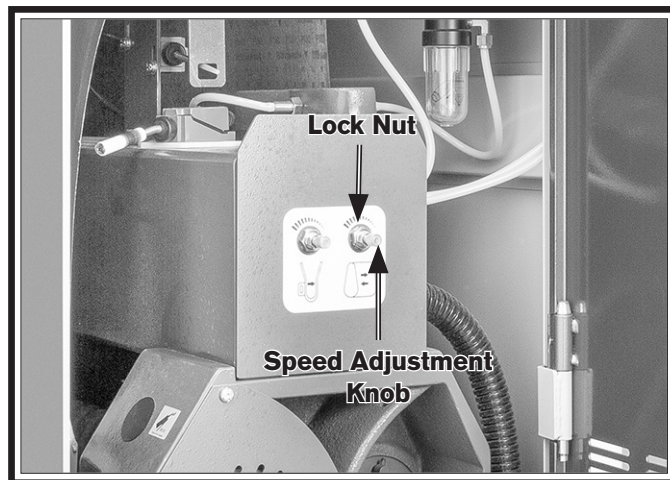
**Figure 62. Location of oscillation timing knob.**

## Adjusting Oscillation Speed

Oscillation speed of the sanding belt is adjustable. Different oscillating speeds yield different sanding results. We recommend trying various speeds on a scrap piece of wood similar to final workpiece.

### To adjust oscillation speed:

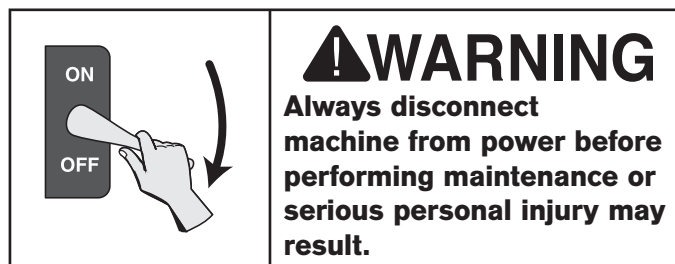
1. Loosen lock nut on speed adjustment knob (see **Figure 63**).



**Figure 63. Speed adjustment components.**

2. Turn speed adjustment knob clockwise to decrease oscillation speed and counterclockwise to increase.
3. Tighten lock nut to secure speed adjustment.

# Servicing Platen



The platen graphite pad and felt pad should be inspected on a daily basis and replaced when they become worn or damaged.

Due to its function, it is very important for the graphite pad to be flat, smooth, and free of grooves or low spots. It is also important that no dust or chips get trapped between the graphite pad and felt pad of the platen.

If surface defects are found, lightly hand-sand the platen to make the surface flat again. If surface defects are more serious, the graphite pad may need to be replaced. If you notice a lot of streaking, this can also be a sign that the graphite pad or felt pad needs to be replaced.

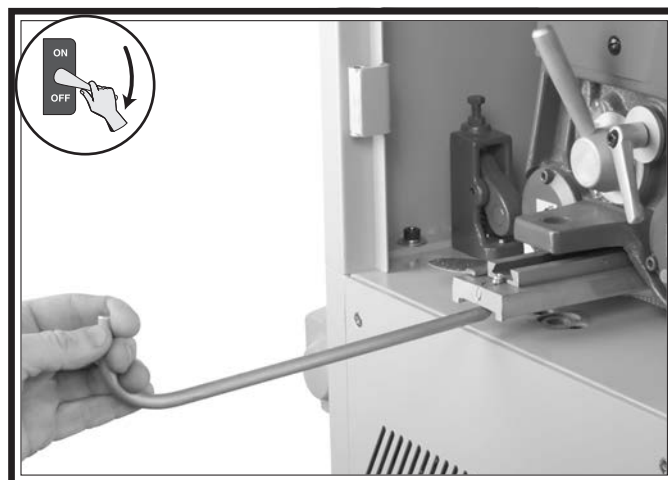
## Tools Needed

	Qty
Platen Removal Tool .....	1
Phillips Head Screwdriver #2.....	1
Graphite Pad .....	1
Drill.....	1
Drill Bit $\frac{3}{16}$ " .....	1
Solvent Cleaner.....	As Needed
Putty Knife .....	1
Felt Pad .....	1
Contact Cement or Spray Adhesive .....	As Needed

## Replacing Graphite Pad

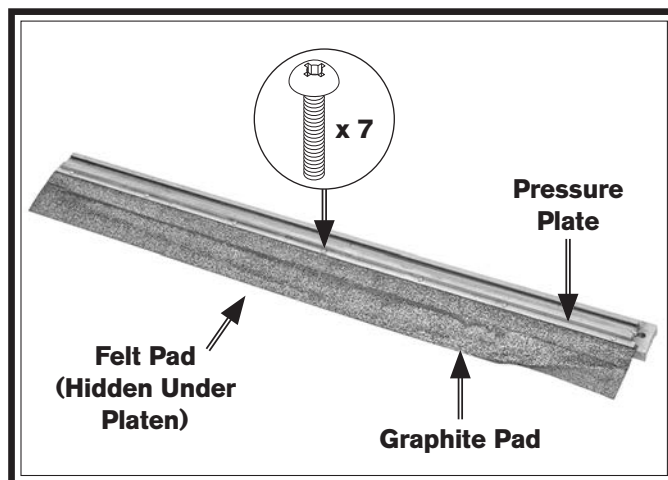
1. DISCONNECT MACHINE FROM POWER!
2. Open left door and detension/remove sanding belt. Keep lock post release lever and stop block removed.

3. Use platen removal tool to remove platen from sander as shown in **Figure 64**.



**Figure 64. Removing platen with platen removal tool.**

4. Remove (7) Phillips head screws and pressure plate that secure graphite pad (see **Figure 65**).



**Figure 65. Platen components.**

5. Install new graphite pad onto platen and secure pad with pressure plate and screws removed in **Step 4**.

**Tip:** If new pad does not have mounting holes, use old pad as a template for drilling new holes in new pad.

6. Insert platen in same manner it was removed, making sure open end of graphite pad points toward front of machine.
7. Install sanding belt, stop block, and lock post release lever, then close left door

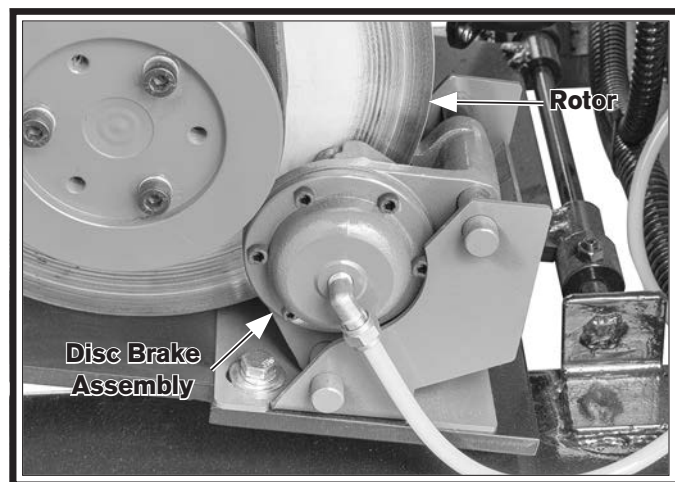
## Replacing Felt Pad

1. Follow **Steps 1–3 of Replacing Graphite Pad on Page 43.**
2. Thoroughly soak felt pad in solvent to loosen glue securing pad to platen, then lift felt pad off and let platen dry. Use putty knife to scrape off any remaining felt and glue.
3. Use spray adhesive or contact cement to secure new felt pad to platen.
4. Follow **Steps 6–7 of Replacing Graphite Pad on Page 43.**

## Checking/Replacing Brake Pads

The disc brake assembly uses brake pads to stop the rotor (see **Figure 66**) when the Emergency Stop button or EMERGENCY STOP plate is pressed or if one of the limit switches is activated. Eventually the brake pads will wear out. Both the inner and outer brake pad should be changed at the same time.

Checking and replacing these is a simple procedure that can be done in the shop.



**Figure 66.** Location of disc brake assembly and rotor.

### Items Needed

	Qty
Phillips Head Screwdriver #2.....	1
Fine Ruler.....	1
Open-End Wrench 14mm .....	1
Hex Wrench 4, 5mm .....	1 Ea.
Inner Brake Pad (#PSB10961302) .....	1
Outer Brake Pad (#PSB10961315) .....	1

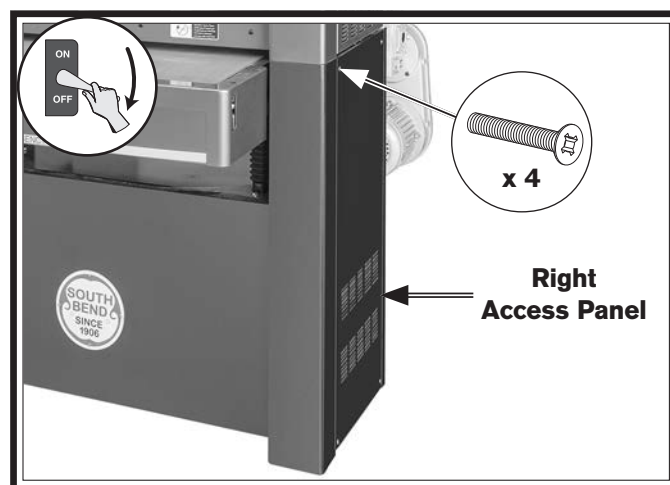
### To check/replace brake pads:

1. **DISCONNECT MACHINE FROM POWER!**
2. Disconnect machine from air, then release all air pressure in machine by opening air valve on regulator (see **Figure 67**). This will cause disc brake assembly to open, allowing removal.



**Figure 67.** Air supply valve opened for brake service.

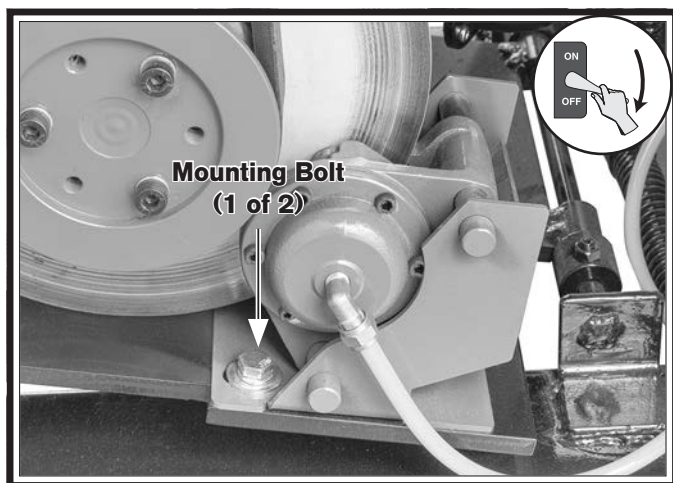
3. Remove (4) flat head screws and right access panel (see **Figure 68**).



**Figure 68.** Location of access panel and securing flat head screws.

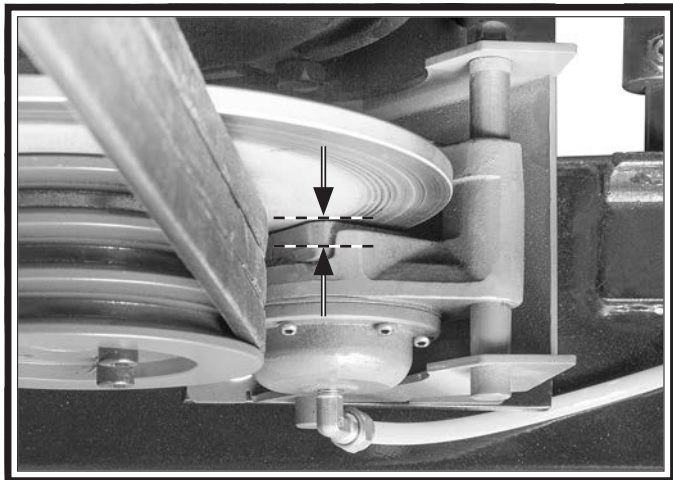


4. Remove (2) mounting bolts, lock washers, and flat washers that secure disc brake assembly to machine motor plate (see **Figure 69**), then pull disc brake assembly away from rotor.



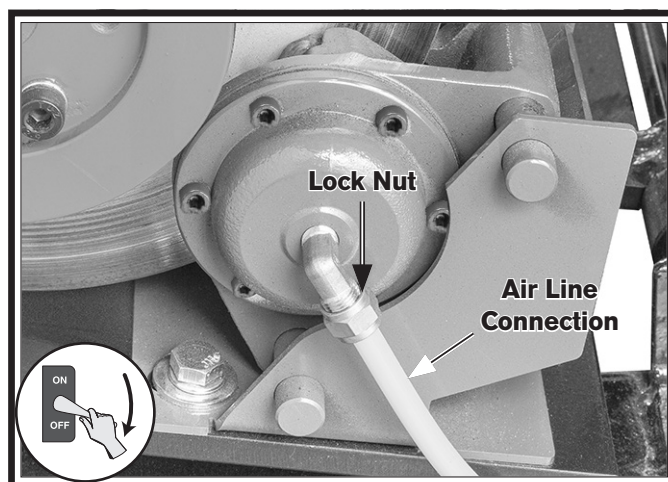
**Figure 69.** Location of disc brake assembly mounting bolts.

5. Measure thickness of each brake pad. The brake pads consist of a metal plate with a composite pad. Measure thickness of composite pads only (see **Figure 70**).
- If thickness of both pads is greater than  $\frac{1}{8}$ " (see **Figure 70**), pads do not need to be replaced. Proceed to **Step 15**.
  - If thickness of either pad is less than  $\frac{1}{8}$ " (see **Figure 70**), proceed to **Step 6** to replace both pads.



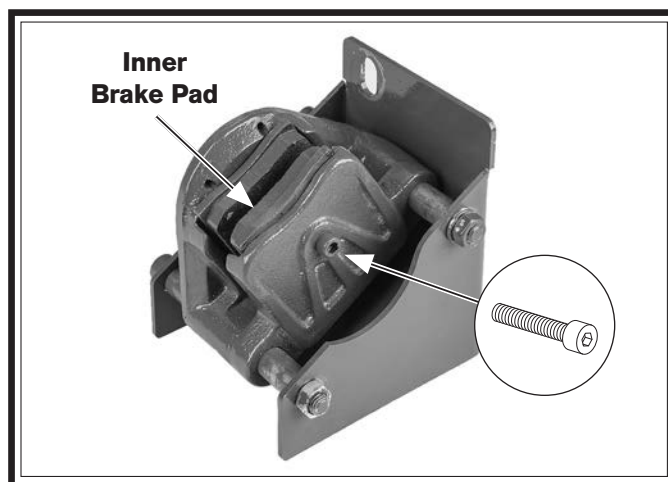
**Figure 70.** Close-up of brake pads.

6. Loosen lock nut and remove air line (see **Figure 71**).



**Figure 71.** Location of air line connection lock nut.

7. Remove inner brake pad cap screw, then remove inner brake pad (see **Figure 72**).

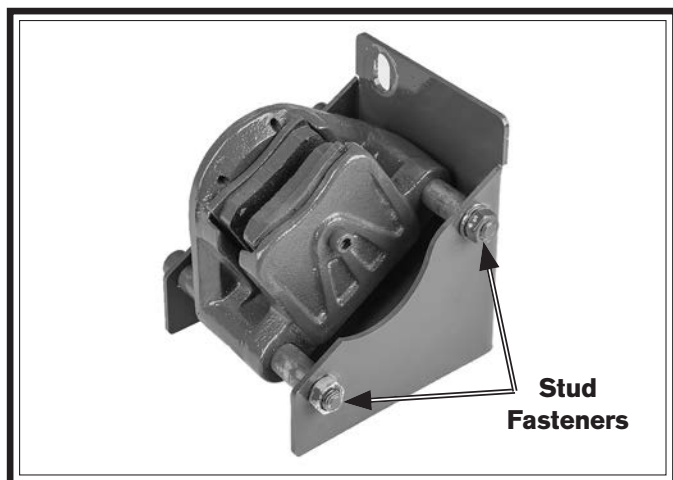


**Figure 72.** Location of inner brake pad and mounting cap screw.

8. Install new inner brake pad and replace cap screw.

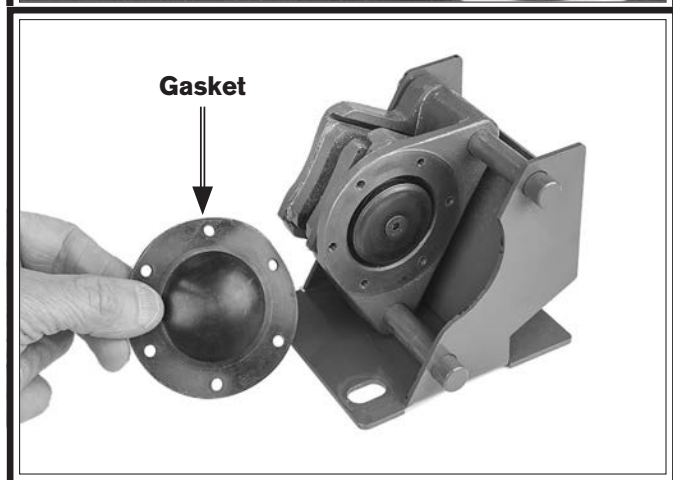
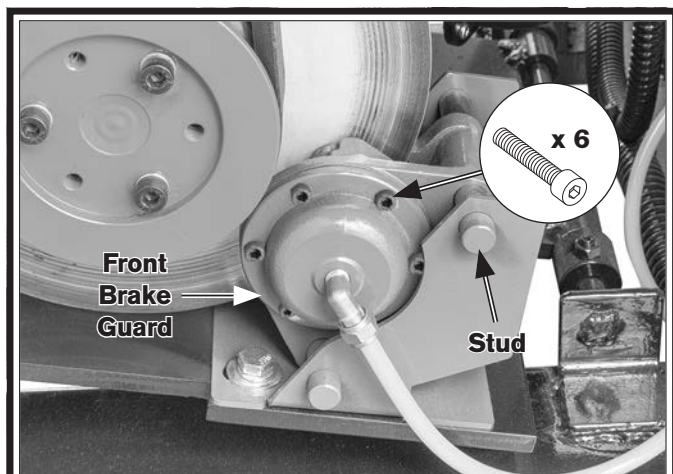


9. Remove (1) brake mount stud hex nut and lock washer (see **Figure 73**).



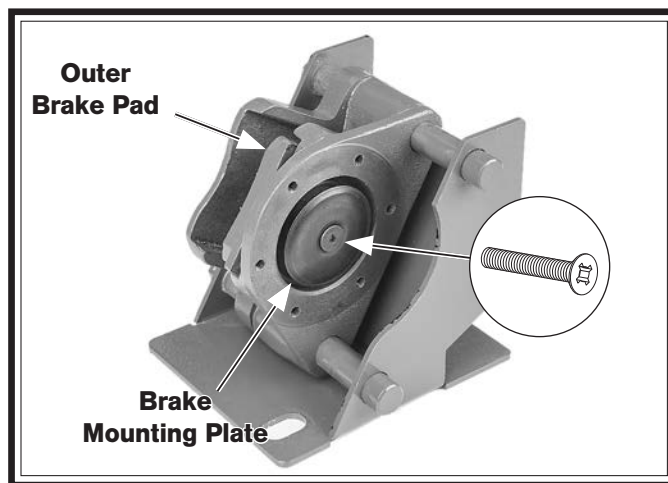
**Figure 73.** Location of brake mount stud fasteners.

10. Remove (1) brake mount stud, (6) cap screws, front brake guard, and gasket (see **Figure 74**).



**Figure 74.** Outer brake pad fastening components.

11. Remove (1) flat head screw, brake mounting plate, compression spring, bushing, and outer brake pad (see **Figure 75**).

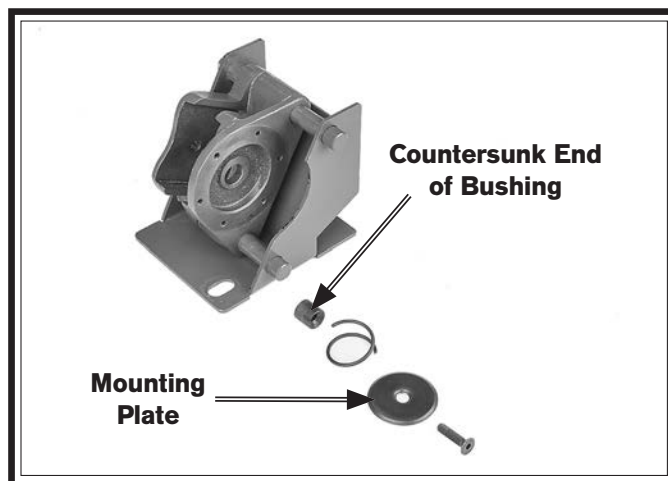


**Figure 75.** Location of brake mounting plate, compression spring, bushing, outer brake pad, and securing screw (inner brake pad removed for clarity).

**Note:** Be careful when removing these components. They are under pressure from the compression spring and could fly apart unexpectedly.

12. Install new outer brake pad then secure with bushing, spring, mounting plate, and flat head screw (see **Figure 76**). Make sure to re-install components the same way they were removed.

**Note:** The countersunk end of the bushing faces the mounting plate.



**Figure 76.** Order of assembly for outer brake pad components.

13. Re-install gasket, front brake guard, screws, and stud removed in **Step 10**.
14. Re-install lock washer and hex nut removed in **Step 9**.
15. Install disc brake assembly around rotor on motor base using (2) mounting bolts, lock washers, and flat washers removed in **Step 4**.
16. Connect air line removed in **Step 6** and secure with lock nut.
17. Install right access panel and secure with screws removed in **Step 3**.
18. Connect air supply to air regulator and machine to power and start sander to test Emergency Stop system to make sure brake works.

## Checking/Adjusting Table Parallelism

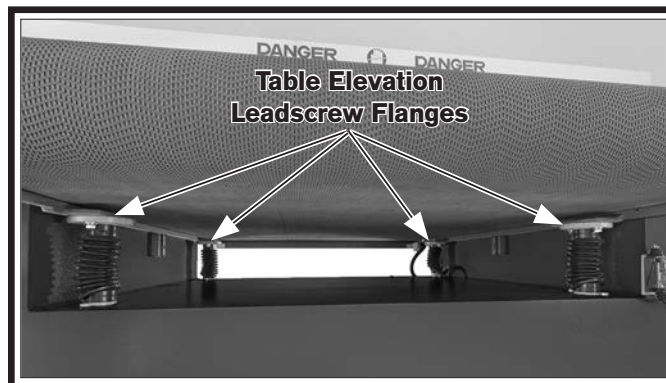
Table parallelism has been adjusted at the factory and should not require adjustment when the machine is new.

We only recommend adjusting table parallelism if absolutely necessary due to factors that may cause the factory settings to change. Adjusting the table parallelism can take a fair amount of patience.

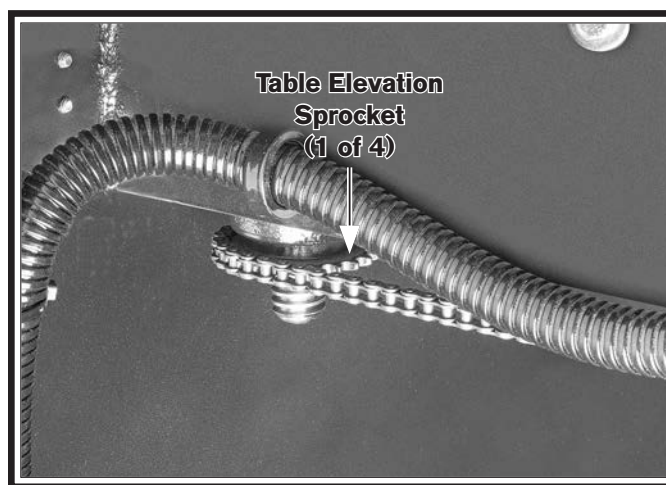
**IMPORTANT:** *DO NOT adjust the table unless you are having trouble sanding your workpiece to a uniform thickness and have eliminated all other possible causes. For instance, a sanding or conveyor belt that is unevenly worn should be replaced before adjusting table parallelism.*

The four corners of the table can be independently adjusted up or down to achieve parallelism with the frame by adjusting the elevation leadscrew flanges (see **Figure 77**) or repositioning the table elevation sprockets (see **Figure 78**).

The four corners of the table can be independently adjusted up or down to achieve parallelism with the frame by adjusting the elevation leadscrew flanges (see **Figure 77**) or repositioning the table elevation sprockets (see **Figure 78**).



**Figure 77.** Table elevation leadscrew flanges located on underside of table.



**Figure 78.** Location of table elevation sprockets (1 of 4) shown.

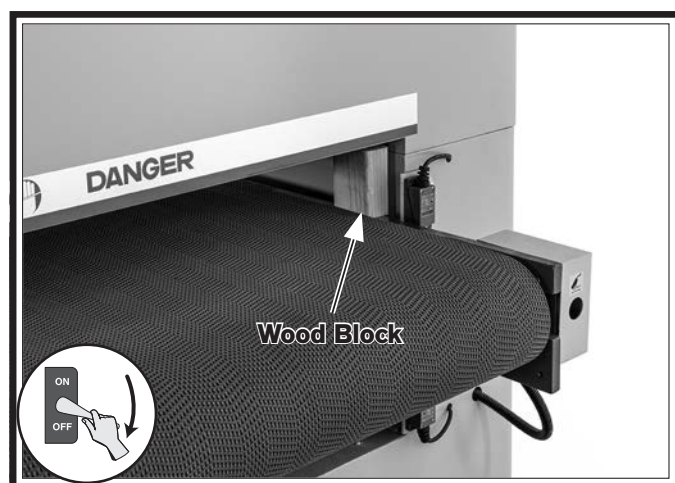
If a table adjustment is needed, take precise notes on the positioning of the table elevation flanges, sprockets, and leadscrews by marking them. This will allow the original setting to be restored if needed.

Tools Needed	Qty
Vacuum Cleaner.....	1
Shop Rags .....	As Needed
Wood Block Approx. 4" Long .....	1
Fine Ruler.....	1
Open-End Wrench 12, 14mm .....	1 Ea.
Phillips Head Screwdriver #2.....	1
White Marker or Correction Fluid .....	As Needed

## Checking Table Parallelism

1. DISCONNECT MACHINE FROM POWER!
2. Use vacuum cleaner and shop rag to clean table and frame at each corner so sawdust will not interfere with measurements during following steps.
3. Adjust table elevation until it is approximately 6" below sanding belt.
4. Take precise measurement of wood block (approximately 4" long) and record measurement.
5. Place wood block on edge of table at rear left corner, then raise table until wood block just touches upper frame (see **Figure 79**). Do not allow table to squeeze or compress wood block.

**Note:** Make sure wood block does not touch conveyor belt.



**Figure 79.** Example of wood block placed for checking table parallelism.

6. Take precise measurements at each of the three remaining corners, between the conveyor table and the upper frame.
  - If measurements from *all* corners in **Step 6** are exactly the same as length of wood block measured in **Step 4**, table is parallel to frame and no adjustment is necessary. Remove wood block.

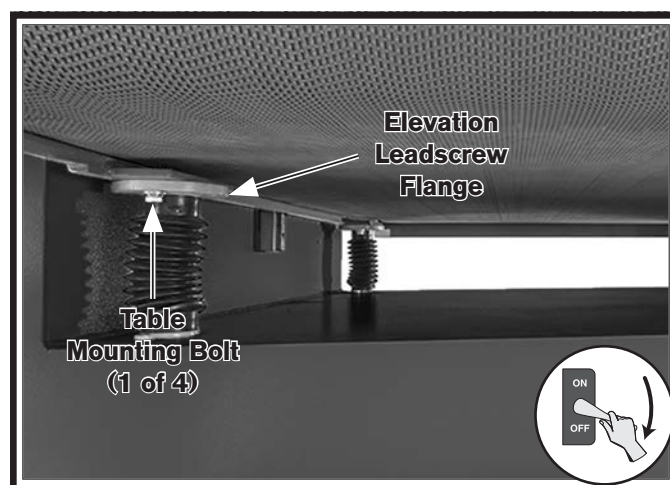
— If measurement of *any* corner from **Step 6** is *not* exactly the same as length of wood block measured in **Step 4**, table is not parallel to frame. DO NOT remove wood block. Proceed to **Adjusting Table Parallelism**.

## Adjusting Table Parallelism

1. DISCONNECT MACHINE FROM POWER!
2. With wood block still positioned at rear left corner of conveyor table, locate elevation leadscrew flange (see **Figure 80**) at corner that needs to be adjusted.
3. Loosen table mounting bolts on flange (see **Figure 80**). Rotate flange a small amount to adjust that corner of table until it is within 0.003" of measurement of wood block.

**Note:** Each leadscrew flange can be adjusted up to 0.015" between right and left sides. Rotating left will lower table and rotating right will raise table.

**Tip:** It may help to rotate elevation leadscrew flange with a vise grip if it is difficult to move.



**Figure 80.** Location of table mounting bolts.

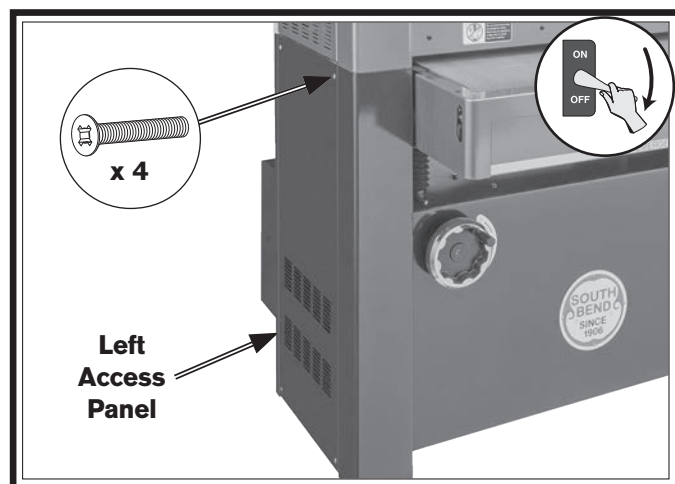
4. Tighten table mounting bolts to secure adjustment.



5. Repeat **Steps 1–4** for any remaining corners that are not parallel with wood block corner.

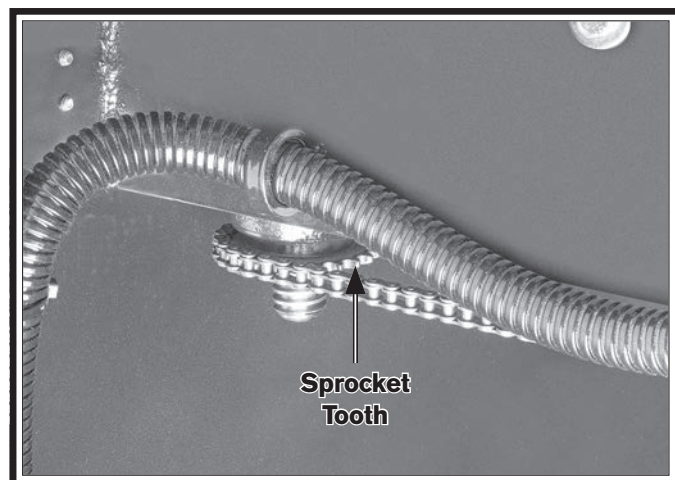
- If all corners of conveyor table are exactly same distance from upper frame, table is parallel and no further adjustment is necessary.
- If any corners are still higher or lower than corner with wood block by more than 0.003", you will need to adjust the elevation leadscrew sprocket at that specific corner. Proceed to **Step 6**.

6. Remove (4) flat head screws and left access panel (see **Figure 81**).



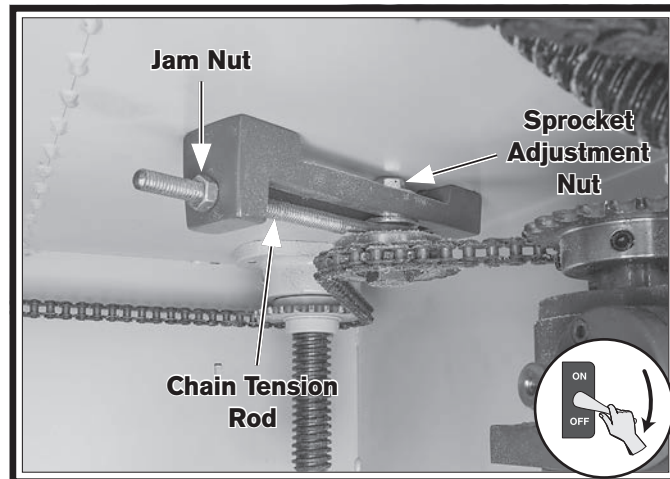
**Figure 81.** Location of access panel and securing flat head screws.

7. Mark one tooth of sprocket (see **Figure 82**) that you are adjusting and its location on frame.



**Figure 82.** Sprocket tooth location.

8. Loosen chain tension sprocket adjustment nut on sprocket wheel shaft and loosen jam nut on chain tension rod (see **Figure 83**).



**Figure 83.** Table elevation chain tension components.

9. Push sprocket adjustment rod toward frame (or away from you) to loosen chain tension.
10. Remove chain from sprocket you want to adjust so only that sprocket can be moved independent of chain.
11. Carefully rotate sprocket just enough to position next tooth at marked location from **Step 7**, then fit chain around sprocket again.

**Note:** Rotate sprocket counterclockwise to raise table; rotate sprocket clockwise to lower table.

12. Pull chain tension rod toward you, tighten jam nut until chain is moderately tight, then tighten sprocket nut to secure (see **Figure 83**).
13. Check table parallelism (refer to **Checking Table Parallelism** on **Page 48**) and, if necessary, repeat **Steps 2–12** until all corners of table are the same distance from upper frame.
14. Remove wood block and install left access panel with securing screws.



# Checking/Adjusting Pressure Rollers

The pressure rollers have been adjusted at the factory and should not require routine maintenance.

Ideally, the pressure rollers should be positioned slightly lower than the sanding drum. However, we recommend verifying this setting. If the pressure rollers are incorrectly adjusted, you can end up with burned sanding belts, streaking, and poor workpiece results.

## Factory Settings

Pressure Roller Setting Below Bottom of Sanding Drum.....0.035"

## Items Needed

## Qty

6' Long 2x4 Cut in Half.....1  
Phillips Head Screwdriver #2.....1  
Open-End Wrench 12, 19mm ..... 1 Ea.

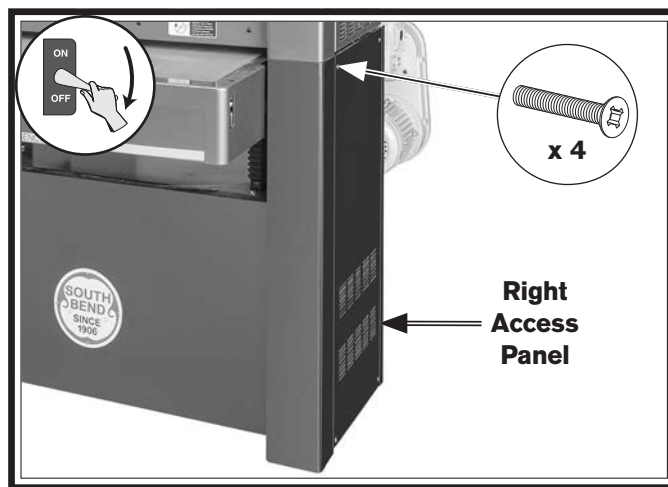
## To check/adjust pressure rollers:

1. DISCONNECT MACHINE FROM POWER!
2. Use jointer and table saw to cut 6' long 2x4 to uniform thickness then cut it in half. Place one board along length of conveyor belt on right-hand side, and place other board on left-hand side, as shown in **Figure 84**.



**Figure 84. Example of 2x4s placed on conveyor belt under sanding drum.**

3. Open right door and remove (4) flat head screws and right access panel (see **Figure 85**).

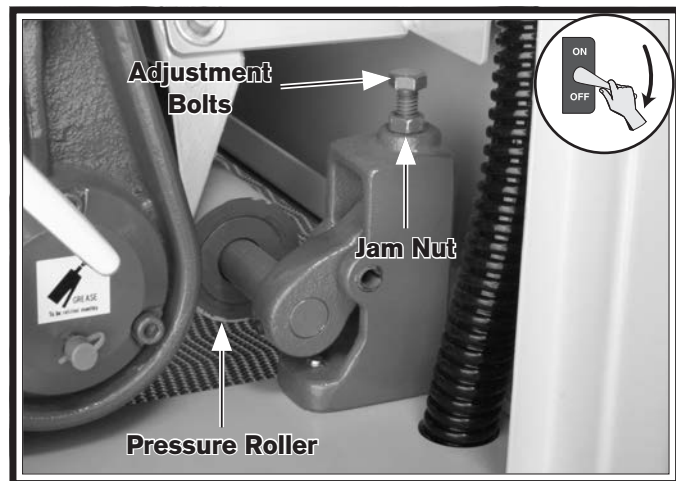


**Figure 85. Location of access panel and securing flat head screws.**

4. Remove V-belts from main motor and sanding drum (refer to **Changing V-Belts** on **Page 52**).
5. Rotate sanding drum by hand, and manually raise table until you hear sandpaper contact surface of wood. DO NOT continue to raise table beyond this point.
6. Connect machine to power and make note of workpiece thickness, then lower table 0.035". This is how much lower infeed and outfeed pressure rollers should be compared to sanding surface of sanding drum.
7. DISCONNECT MACHINE FROM POWER!
8. Open right and left doors.

9. Loosen infeed pressure roller jam nuts on either side of infeed pressure roller, rotate adjustment bolts to lower infeed pressure roller until it just touches boards, then retighten jam nuts to secure (see **Figure 86**)

**Note:** *DO NOT continue to lower pressure roller beyond this point.*



**Figure 86. Pressure roller adjustment components.**

10. Repeat **Steps 7–8** for outfeed pressure roller.

**Note:** *Variables such as feed rate, depth of cut, and type of sanding belt can play a big part in determining proper amount of downward pressure exerted by rollers. Some experimentation may be necessary to achieve desired results. However, under no circumstances should pressure rollers be set even with, or higher than, sanding rollers.*

11. Install V-belts (refer to **Changing V-Belts** on **Page 52**).
12. Lower table and remove 2x4s.
13. Close and secure all doors and install access right panel.

## Checking/Adjusting V-Belt Tension

The V-belts must be tensioned properly for best performance, and to ensure the sanding drum stops when the emergency brake is applied. Always check all V-belts at the same time.

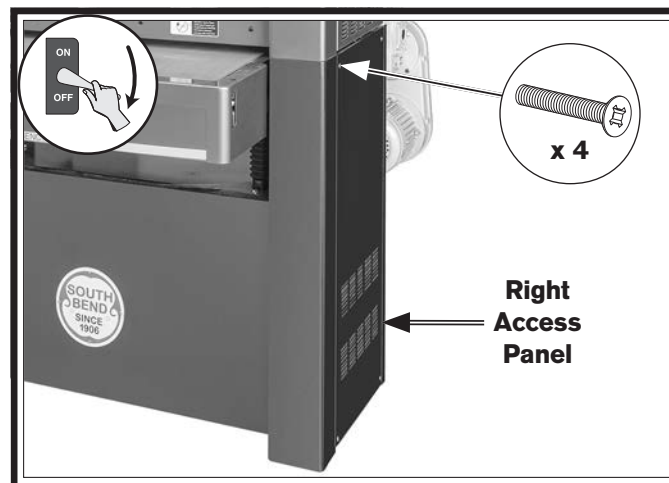
**IMPORTANT:** *Loose belts will not allow the sanding drum to stop immediately if the **EMERGENCY STOP!** plate or Emergency Stop button is pushed.*

### Tools Needed

	Qty
Phillips Head Screwdriver #2.....	1
Open-End Wrench 19mm .....	1

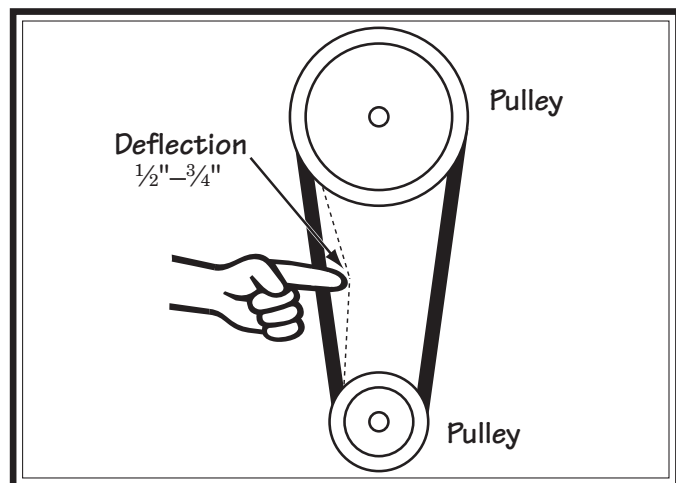
### To check/adjust V-belt tension:

1. DISCONNECT MACHINE FROM POWER!
2. Remove (8) flat head screws and both access panels (see **Figure 87**).



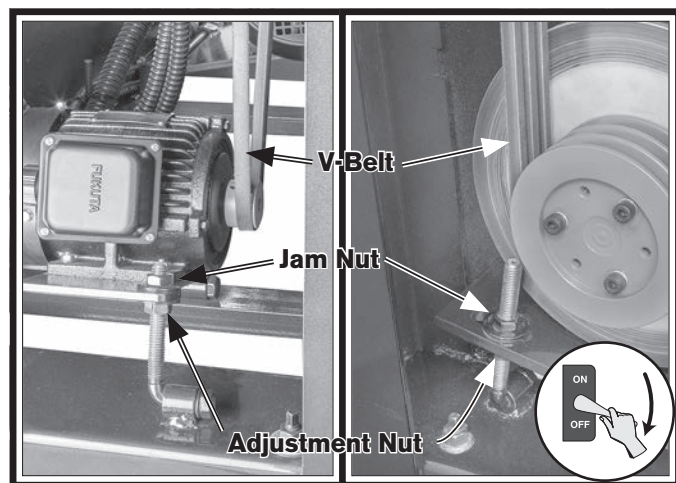
**Figure 87. Location of access panel and securing flat head screws.**

3. Check belt tension: Each belt is correctly tensioned when there is approximately  $\frac{1}{2}$ "– $\frac{3}{4}$ " deflection when it is pushed with moderate pressure, as shown in **Figure 88**.



**Figure 88. Checking V-belt tension.**

- If there is approximately  $\frac{1}{2}$ "– $\frac{3}{4}$ " deflection when V-belts are pushed with moderate pressure, V-belts are properly tensioned, and no adjustment is necessary.
  - If there is not approximately  $\frac{1}{2}$ "– $\frac{3}{4}$ " deflection when V-belts are pushed with moderate pressure, V-belts are not properly tensioned. Proceed to **Step 4**.
4. Loosen applicable V-belt tension jam nuts to allow motors to raise or lower (see **Figure 89**).



**Figure 89. V-belt tension adjustment components.**

5. Rotate V-belt tension adjustment nuts to raise or lower motors until there is approximately  $\frac{1}{2}$ "– $\frac{3}{4}$ " deflection when V-belts are pushed with moderate pressure, then tighten jam nut to secure.
- Rotate adjustment nuts clockwise to allow motors to drop and apply tension to V-belts.
  - Rotate adjustment nuts counterclockwise to raise motors and release V-belt tension.
6. Install access panels and secure with screws removed in **Step 2**.

## Changing V-Belts

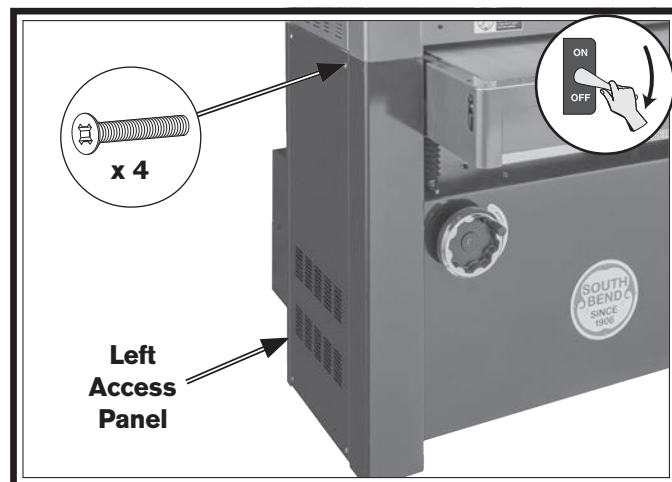
Check the V-belts periodically for signs of glazing, cracking, fraying, oil/grease on belts, or any other evidence of damage or wear. If any of these conditions are present, replace the V-belt. If any of the main motor V-belts show these conditions, replace the V-belts as a matched set.

## Changing Table Elevation V-Belt

Tools Needed	Qty
Phillips Head Screwdriver #2.....	1
Open-End Wrench 19mm .....	1

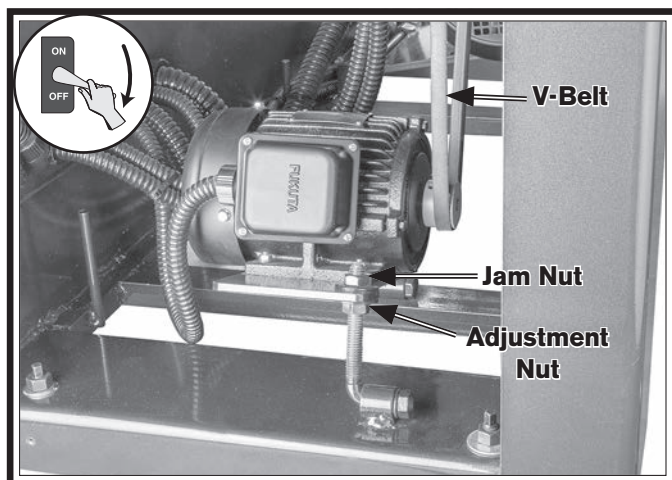
### To change table elevation V-belt:

1. DISCONNECT MACHINE FROM POWER!
2. Remove (4) flat head screws and left access panel (see **Figure 90**).



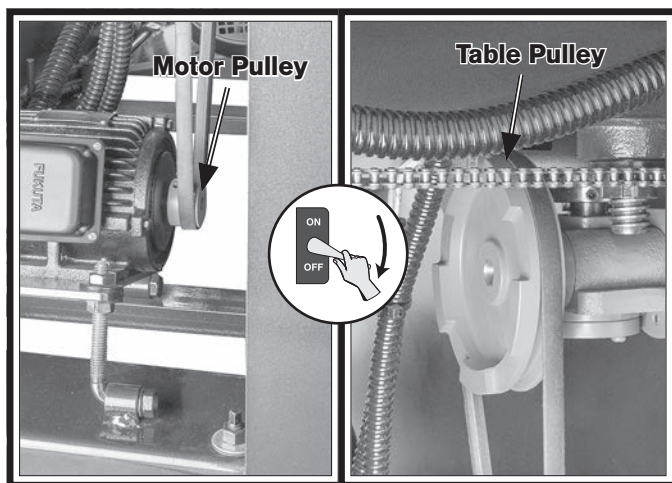
**Figure 90. Location of left access panel.**

3. Loosen V-belt tension jam nut to allow motor to raise or lower (see **Figure 91**).
4. Rotate V-belt tension adjustment nut counterclockwise to release V-belt tension (see **Figure 91**) until you can remove V-belt from pulleys.



**Figure 91. Table elevation motor V-belt tension components.**

5. Place new V-belt onto table pulley and then loop other end of V-belt around motor pulley (see **Figure 92**).



**Figure 92. Location of table and motor pulleys.**

6. Properly tension V-belt (refer to **Checking/Adjusting V-Belt Tension** on **Page 51** for more information).
7. Install left access panel.

## Changing Main Motor V-Belts

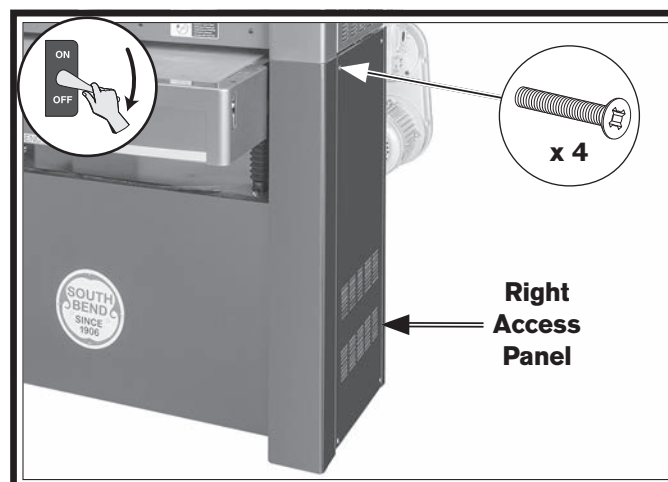
### Tools Needed

Qty

Phillips Head Screwdriver #2.....	1
Open-End Wrench 19mm .....	1

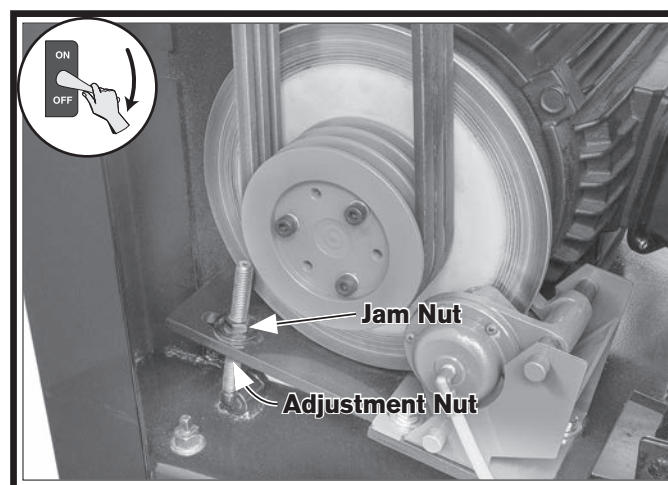
### To change main motor V-belts:

1. DISCONNECT MACHINE FROM POWER!
2. Open right door and remove (4) flat head screws and right access panel (see **Figure 93**).



**Figure 93. Location of panel and securing screws.**

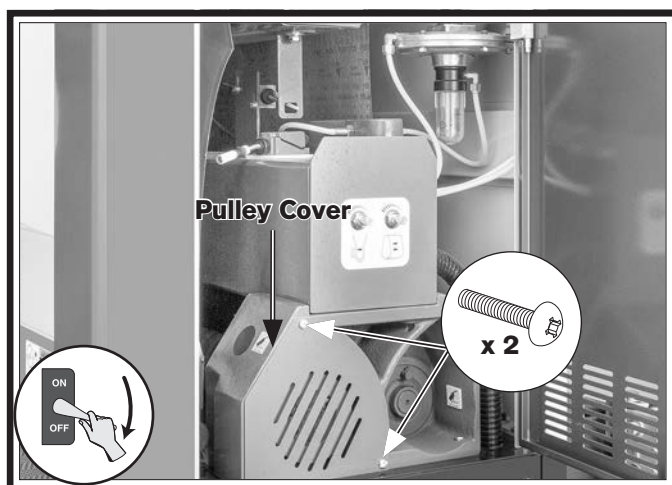
3. Loosen V-belt tension jam nut to allow motor to raise or lower (see **Figure 94**).
4. Rotate V-belt tension adjustment nut counterclockwise to release V-belt tension (see **Figure 94**) until you can remove V-belts from pulley.



**Figure 94. Main motor V-belt tension components.**

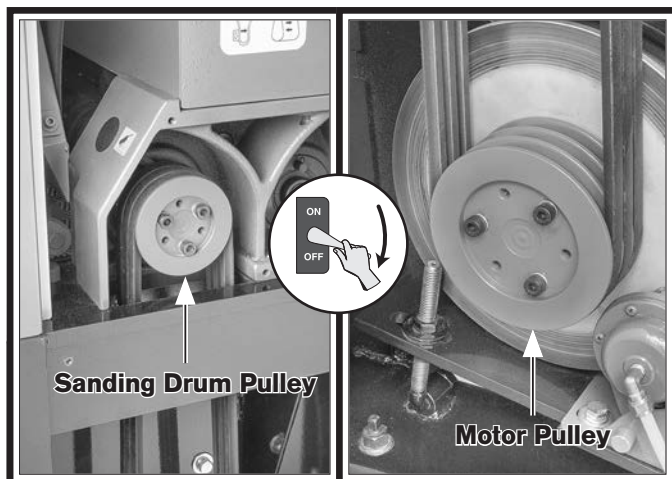


5. Loosen (2) Phillips head screws holding pulley cover in place (see **Figure 95**).



**Figure 95.** Location of pulley cover and Phillips head screws.

6. Remove V-belts from sanding drum pulley.
7. Place new set of V-belts onto sanding drum pulley and then loop other end of V-belts around motor pulley (see **Figure 96**).



**Figure 96.** Location of sanding drum and main motor pulley.

8. Install pulley cover and screws from **Step 6**.
9. Properly tension V-belt (refer to **Checking/Adjusting V-Belt Tension** on **Page 51** for more information).
10. Install right access panel and close right door.

## Adjusting Conveyor Belt Tension

The conveyor belt tension has been adjusted at the factory and should require no further attention. However, adjust the conveyor belt tension if you notice that your conveyor belt is slipping or is tracking off center.

The conveyor belt tension is adjusted by rotating two adjustment bolts, located on each side of the conveyor table (see **Figure 97**).

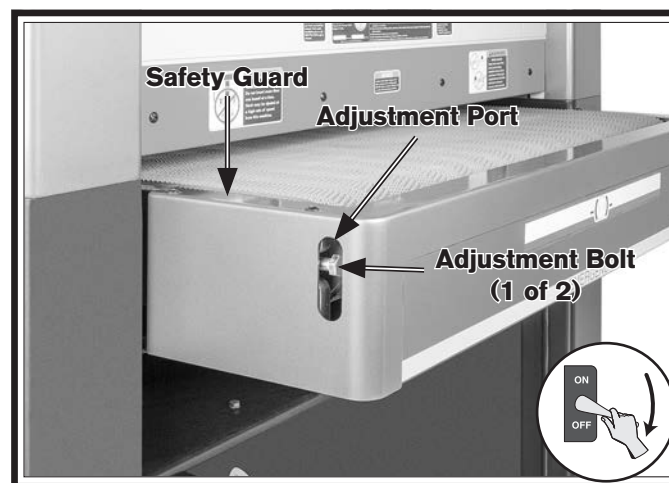
### Tools Needed

Open-End Wrench 19mm .....1

Qty

### To adjust conveyor belt tension:

1. DISCONNECT MACHINE FROM POWER!
2. Find adjustment ports in safety guard at front end of conveyor table to access adjustment bolts inside (see **Figure 97**).
3. Rotate both left and right adjustment bolts (see **Figure 97**) equally to adjust conveyor belt tension. When tensioned properly, you should not be able to lift the conveyor belt off of table surface or slide it back and forth.
  - Rotate adjustment bolts clockwise to *increase* conveyor belt tension.
  - Rotate adjustment bolts counterclockwise to *decrease* conveyor belt tension.



**Figure 97.** Location of conveyor belt adjustment bolts.

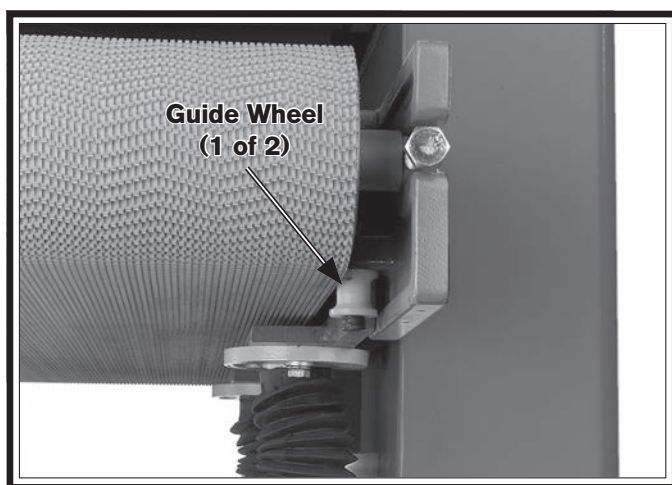
# Adjusting Conveyor Belt Tracking

The conveyor belt is tracking properly when it stays centered on its rollers during operation and does not wander from side to side. The tracking is adjusted by rotating either the left or right conveyor belt tension adjustment bolt (see **Figure 98**), depending on the needs of the adjustment.



**Figure 98.** Location of conveyor belt adjustment bolts.

In addition, two guide wheels (see **Figure 99**) protect the conveyor belt from damage if the tracking is out of adjustment, by preventing it from rubbing against the inside surfaces of the conveyor table.



**Figure 99.** Conveyor belt guide wheels (safety guard removed for clarity).

## NOTICE

**Adjust conveyor belt tension before adjusting conveyor belt tracking.**

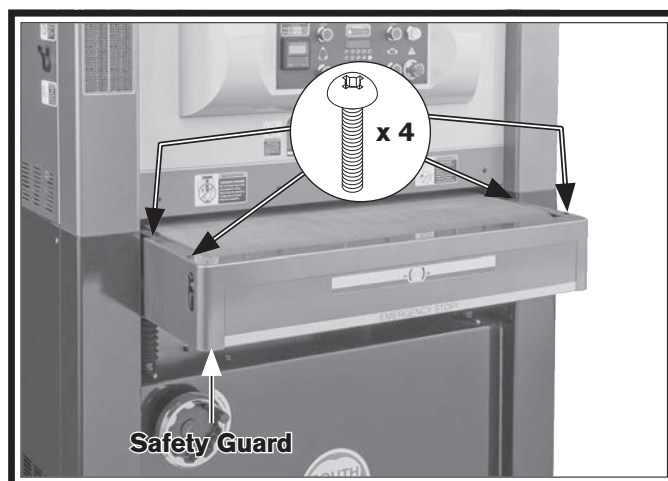
### Tools Needed

### Qty

Phillips Head Screwdriver #2.....	1
Open-End Wrench 19mm .....	1

### To adjust conveyor belt tracking:

1. Remove safety guard at front of conveyor belt by removing (4) Phillips head screws shown in **Figure 100**.



**Figure 100.** Location of safety guard and Phillips head screws.

2. Turn conveyor belt **ON**.
  - If conveyor belt is tracking to the *right*, rotate *right* adjustment bolt (see **Figure 98**) *clockwise*.
  - If conveyor belt is tracking to the *left*, rotate *left* adjustment bolt (see **Figure 98**) *clockwise*.
3. Run conveyor belt for 3–5 minutes and recheck tracking.
4. Repeat **Steps 2–3**, as necessary, until conveyor belt is properly tracking.

**Note:** *Edge of conveyor belt should just touch guide wheels as shown in **Figure 99**.*

5. Install safety guard and securing screws removed in **Step 1**.

# Replacing Conveyor Belt

Replace the conveyor belt if it becomes damaged or you are not able to adjust the conveyor belt tracking due to excessive wear (refer to **Adjusting Conveyor Belt Tracking**, beginning on **Page 55**).

## Items Needed

	Qty
Open-End Wrenches 10, 14, 17mm.....	1 Ea.
Lifting Assistants.....	As Needed
Phillips Head Screwdriver #2.....	1
Hex Wrench 8mm .....	1
Permanent Marker .....	1
8' 2x4s .....	2

**To replace conveyor belt, match steps below to Figure 101 on following page:**

1. Raise table up so conveyor belt is approximately two-inches away from sanding roller or platen, and then **DISCONNECT MACHINE FROM POWER!**
2. Remove gearbox mounting bracket. Then with an assistant's help, slide motor and gearbox from roller shaft and lower it to floor.  
  
***Note:** Do not loosen two vibration dampening washers shown in **Figure 101**.*
3. Remove two table height limit switches.
4. Remove both access panels.
5. Remove left and right table guides.
6. Using permanent marker, mark all four leadscrew flange positions and remove all hex bolts from flanges. Try not to turn flanges during following steps.
7. Remove EMERGENCY STOP! push panel limit switch from table, remove all mounting screws, and remove front guard.

8. Insert two 2x4 x 8' wooden studs under table for support, then have assistant help lift table slightly and move it out of rear of machine.
9. Turn both tracking adjustment bolts counter-clockwise five turns, remove one roller support, and slide drum out of table assembly.
10. Remove old conveyor belt, inspect rollers, bearings, and table for wear and replace as required.

11. Install new conveyor belt.

**Note:** *Belt is non-directional.*

12. Install front roller, roller support, and turn both tracking adjustment bolts clockwise equally so conveyor belt becomes taught and does not hang loose. **DO NOT OVERTIGHTEN** belt tension.
13. With lifting assistant, install table from rear.
14. Install table guides and access panels.
15. Align leadscrew flanges with marks made in **Step 6**, then install hex bolts.
16. Install table height limit switches so upper switch clicks when conveyor surface is  $\frac{1}{4}$ " away from sandpaper, and lower switch clicks when conveyor table is  $\frac{1}{4}$ " higher than its lowest position. Make sure to test settings with handwheel manually so table does not crash if incorrectly set at first use.
17. With assistant, install gearbox and mounting bracket.
18. Install front guard and EMERGENCY STOP! push panel limit switch.
19. Refer to **Adjusting Conveyor Belt Tracking** on **Page 55** to adjust belt tracking.

# Conveyor Belt Removal Sequence

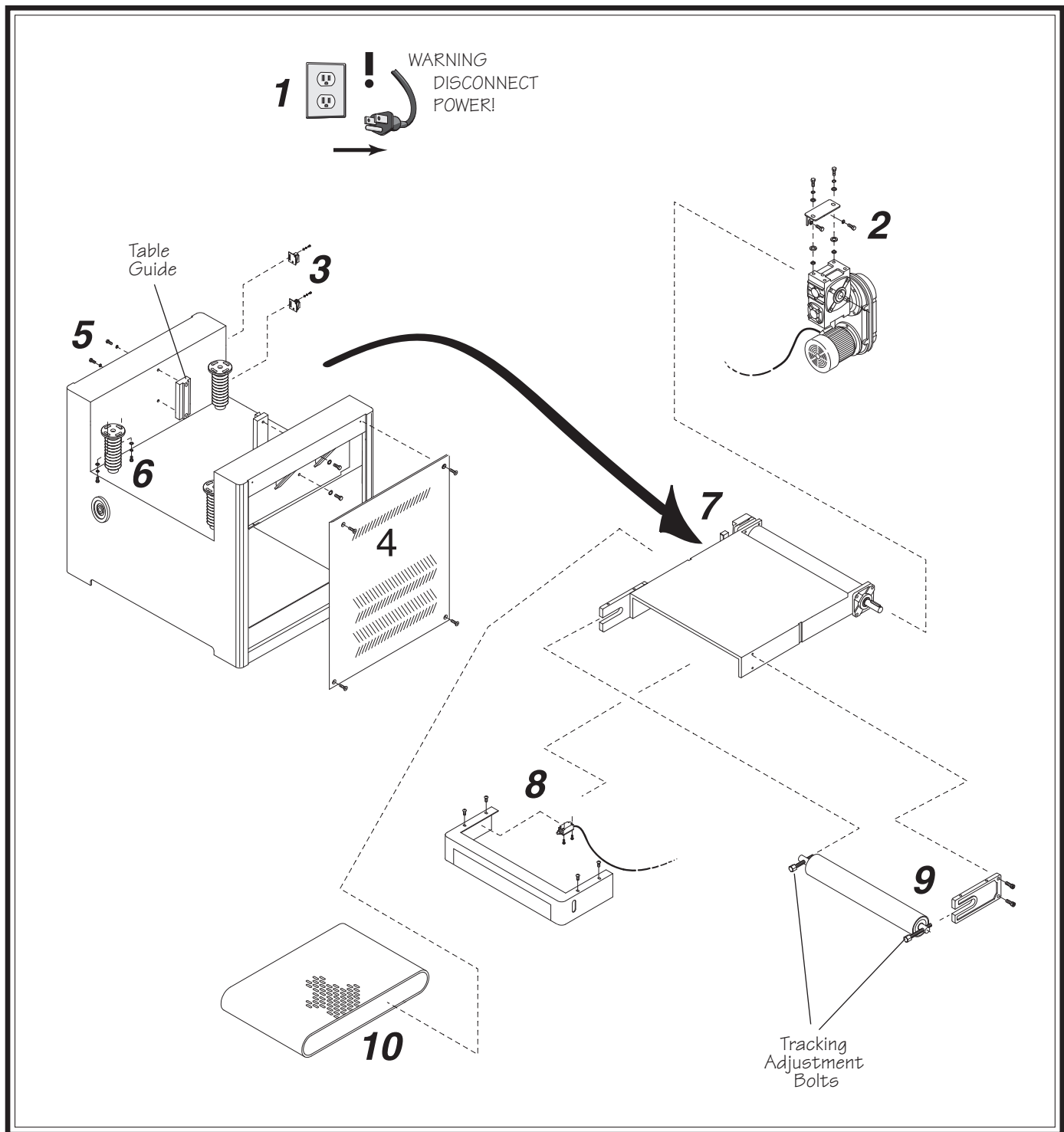


Figure 101. Conveyor belt removal sequence.



## Calibrating Digital Display



For the digital display to be accurate, it must be calibrated. We recommend calibrating your scale pointer anytime you adjust the table elevation leadscrews.

### Items Needed

### Qty

3' Long 2x4.....	1
Digital Calipers .....	1

### To calibrate digital display:

1. Sand planed 2x4 and measure workpiece thickness.
2. Check digital display reading.
  - If digital display matches measurement taken in **Step 1**, no calibration is required.
  - If digital display *does not* match measurement taken in **Step 1**, proceed to **Step 3**.
3. Press any number button on keypad. Current height setting will blink on digital display.
4. Use keypad to enter measurement taken in **Step 1**, then hold both Table Stop  and Set  keys together for 3 seconds to set new input (see **Figure 102**).

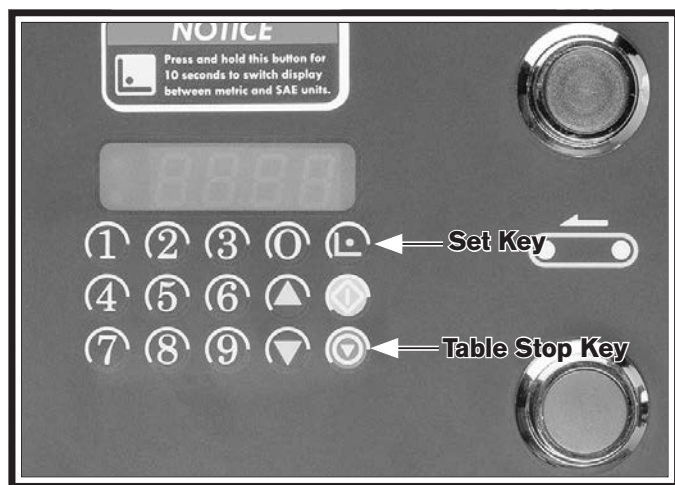


Figure 102. Digital display calibration keys.

## Adjusting Belt Tracking Limit Switches

Sanding belt tracking limit switches are placed on both sides of the sanding belt to act as emergency machine stops if the belt travels too far to one side or the other during oscillation (see **Figure 103**).

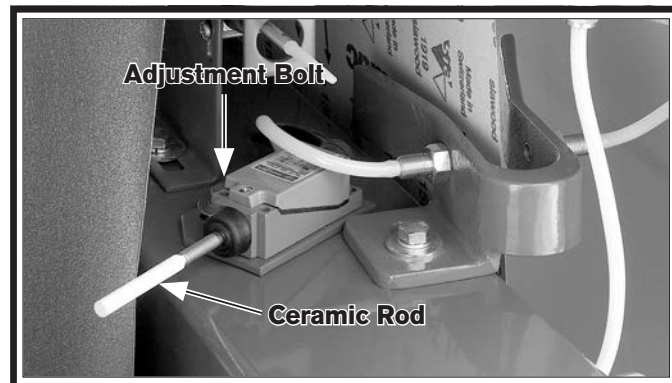


Figure 103. Tracking limit switch adjustment bolt (1 of 2).

### Tool Needed

### Qty

Open-End Wrench 12mm .....	1
----------------------------	---

### To adjust sanding belt tracking limit switches:

1. Make sure sanding belts are tracking and oscillation is adjusted properly (refer to **Adjusting Oscillation Timing & Speed** on **Page 41**).
2. DISCONNECT MACHINE FROM POWER!
3. Release belt tension, center sanding belts on top rollers, then re-tension belts.
4. Measure distance from edge of sanding belts to limit switch ceramic rod (see **Figure 103**).
5. Loosen adjustment bolt shown in **Figure 103**, and move switch so belt and ceramic rod are approximately  $\frac{1}{4}$ " apart.
6. Tighten bolt and repeat adjustment with limit switch on other side if necessary.
7. Start machine and make sure it is working properly.

If you need replacement parts, or if you are unsure how to do any of the solutions given here, feel free to call us at (360) 734-1540.

Symptom	Possible Cause	Possible Solution
Machine does not start or a breaker trips immediately after startup.	<ol style="list-style-type: none"> <li>Emergency Stop button depressed/at fault.</li> <li>Incorrect power supply voltage or circuit size.</li> <li>Machine fuse blown.</li> <li>Power supply circuit breaker tripped or fuse blown.</li> <li>EMERGENCY STOP plate limit switch stuck/at fault.</li> <li>Table limit switch engaged/at fault.</li> <li>Sanding belt tracking limit switch engaged/at fault.</li> <li>Sanding belt tension limit switch engaged/at fault.</li> <li>Motor wires connected incorrectly.</li> <li>ON/OFF button at fault.</li> <li>Contactors not energized/at fault.</li> <li>Thermal overload relay has tripped/at fault.</li> <li>Wiring broken, disconnected, or corroded.</li> <li>Controller at fault.</li> <li>Motor at fault.</li> </ol>	<ol style="list-style-type: none"> <li>Rotate Emergency Stop button head to reset. Replace if at fault.</li> <li>Ensure correct power supply voltage and circuit size (<b>Page 12</b>).</li> <li>Replace fuse/ensure no shorts.</li> <li>Ensure circuit is sized correctly and free of shorts. Reset circuit breaker or replace fuse.</li> <li>Free stuck switch/replace.</li> <li>Adjust table to correct height/replace switch.</li> <li>Center sanding belt so it is not touching limit switches/adjust limit switch(es) (<b>Page 58</b>)/replace switch(es).</li> <li>Turn on air pressure and tension sanding belt/replace limit switch.</li> <li>Correct motor wiring connections.</li> <li>Replace button.</li> <li>Test all legs for power; replace if necessary.</li> <li>Reset. Adjust or replace if at fault.</li> <li>Fix broken wires or disconnected/corroded connections.</li> <li>Inspect/replace if at fault.</li> <li>Test/repair/replace.</li> </ol>
Main motor stalls or is underpowered.	<ol style="list-style-type: none"> <li>Workpiece material not suitable for machine.</li> <li>Feed rate too fast/cutting depth too deep.</li> <li>V-belt(s) worn/loose.</li> <li>Pulley/sprocket slipping on shaft or misaligned.</li> <li>Motor wired incorrectly.</li> <li>Machine undersized for task.</li> <li>Motor overheated.</li> <li>Contactors not energized/at fault.</li> <li>Motor or motor bearings at fault.</li> </ol>	<ol style="list-style-type: none"> <li>Only sand wood/ensure moisture is below 20%.</li> <li>Decrease feed rate (<b>Page 33</b>)/cutting depth.</li> <li>Inspect/replace belt(s) (<b>Page 52</b>).</li> <li>Tighten/replace loose pulley/shaft, check for/correct alignment.</li> <li>Wire motor correctly (<b>Page 70</b>).</li> <li>Clean/replace sandpaper; reduce feed rate/depth of cut.</li> <li>Clean motor, let cool, and reduce workload.</li> <li>Test all legs for power/repair/replace if at fault.</li> <li>Test/repair/replace.</li> </ol>
Table moves up when it should move down and down when it should move up.	<ol style="list-style-type: none"> <li>Power connections wired out of phase.</li> </ol>	<ol style="list-style-type: none"> <li>Correct phase polarity (<b>Page 24</b>).</li> </ol>
Machine slows when operating.	<ol style="list-style-type: none"> <li>Feed rate too high.</li> <li>Excessive depth of cut.</li> <li>Sanding belt grit too fine for job.</li> </ol>	<ol style="list-style-type: none"> <li>Reduce feed rate (<b>Page 33</b>).</li> <li>Reduce depth of cut.</li> <li>Replace with coarser grit sanding belt (<b>Page 31</b>).</li> </ol>

Symptom	Possible Cause	Possible Solution
Machine has vibration or noisy operation.	<ol style="list-style-type: none"> <li>1. Motor or component loose.</li> <li>2. V-belt(s) worn, loose, or pulleys misaligned.</li> <li>3. Machine not secured to floor.</li> <li>4. Motor fan rubbing on fan cover.</li> <li>5. Motor bearings at fault.</li> <li>6. Conveyor gearbox at fault.</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace damaged or missing bolts/nuts or tighten if loose.</li> <li>2. Inspect/replace belts with a new matched set (<b>Page 52</b>). Realign pulleys if necessary.</li> <li>3. Tighten mounting bolts; relocate/shim machine.</li> <li>4. Fix/replace fan cover; replace loose/damaged fan.</li> <li>5. Test by rotating shaft; rotational grinding/loose shaft requires bearing replacement.</li> <li>6. Rebuild gearbox for bead gear(s)/bearing(s).</li> </ol>
Loud, repetitive noise coming from machine.	<ol style="list-style-type: none"> <li>1. Pulley set screws or keys missing or loose.</li> <li>2. Motor fan rubbing on fan cover.</li> <li>3. V-belt(s) defective or damaged.</li> </ol>	<ol style="list-style-type: none"> <li>1. Inspect pulley keys and set screws. Replace or tighten if necessary.</li> <li>2. Fix/replace fan cover; replace loose/damaged fan.</li> <li>3. Replace V-belt(s) (<b>Page 52</b>).</li> </ol>
Machine is loud, overheats or bogs down during operation.	<ol style="list-style-type: none"> <li>1. Excessive depth of cut.</li> <li>2. Sanding belt worn/clogged.</li> </ol>	<ol style="list-style-type: none"> <li>1. Decrease depth of cut.</li> <li>2. Clean/replace sanding belt (<b>Page 40 &amp; 31</b>).</li> </ol>
Uneven thickness from left to right of board.	<ol style="list-style-type: none"> <li>1. Sanding belt worn unevenly.</li> <li>2. Feed table not parallel to upper frame.</li> <li>3. Conveyor belt worn.</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace sanding belt (<b>Page 31</b>). Feed workpieces evenly across sanding belt, not just on one side.</li> <li>2. Adjust feed table (<b>Page 47</b>).</li> <li>3. Replace conveyor belt (<b>Page 56</b>).</li> </ol>
Workpiece slips on conveyor belt.	<ol style="list-style-type: none"> <li>1. Pressure rollers set too high.</li> <li>2. Dirty/worn conveyor belt.</li> </ol>	<ol style="list-style-type: none"> <li>1. Lower pressure rollers (<b>Page 50</b>).</li> <li>2. Clean/replace conveyor belt (<b>Page 56</b>).</li> </ol>
Grooves down length of workpiece.	<ol style="list-style-type: none"> <li>1. Pressure rollers dirty/damaged.</li> <li>2. Platen set too low.</li> <li>3. Platen graphite pad damaged.</li> </ol>	<ol style="list-style-type: none"> <li>1. Clean/repair/replace pressure rollers.</li> <li>2. Raise platen to reduce pressure (<b>Page 32</b>).</li> <li>3. Replace graphite pad (<b>Page 43</b>).</li> </ol>
Snake-shaped marks on workpiece.	<ol style="list-style-type: none"> <li>1. Sanding belt dirty/damaged.</li> <li>2. Pressure rollers dirty/damaged.</li> </ol>	<ol style="list-style-type: none"> <li>1. Clean/replace sanding belt (<b>Page 40 &amp; 31</b>).</li> <li>2. Clean/repair pressure rollers.</li> </ol>
Lines across width of workpiece.	<ol style="list-style-type: none"> <li>1. Sanding belt seam open/damaged.</li> <li>2. Platen set too low.</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace sanding belt (<b>Page 31</b>).</li> <li>2. Raise platen to reduce pressure (<b>Page 32</b>).</li> </ol>
Sanding belt clogs quickly.	<ol style="list-style-type: none"> <li>1. Sanding belt grit too fine for particular job.</li> <li>2. Excessive depth of cut.</li> <li>3. Wood is too moist.</li> <li>4. Using amp load meter to establish material removal amount.</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace with coarser grit sanding belt (<b>Page 31</b>).</li> <li>2. Reduce depth of cut.</li> <li>3. Allow wood to dry to below 20% moisture content.</li> <li>4. Use alternate methods to establish material removal amount (<b>Page 30</b>).</li> </ol>
Rounded workpiece edges.	<ol style="list-style-type: none"> <li>1. Excessive depth of cut.</li> </ol>	<ol style="list-style-type: none"> <li>1. Reduce depth of cut.</li> </ol>
Sanding belt does not tension correctly; rollers slip under belt.	<ol style="list-style-type: none"> <li>1. Low air pressure</li> <li>2. Air leaks in system.</li> <li>3. Air cylinder shaft worn/damaged.</li> </ol>	<ol style="list-style-type: none"> <li>1. Adjust air pressure to 75 PSI at primary regulator.</li> <li>2. Inspect all hoses and connections for leaking air; use a water/soap mixture on suspected area to detect bubbles.</li> <li>3. Repair/replace air cylinder.</li> </ol>

Symptom	Possible Cause	Possible Solution
Glossy spots or streaks on workpiece.	<ol style="list-style-type: none"> <li>1. Worn sanding belt.</li> <li>2. Rear pressure roller too low.</li> <li>3. Feed rate too low.</li> <li>4. Platen set too low.</li> <li>5. Graphite or felt pad worn/damaged.</li> <li>6. Using amp load meter to establish material removal amount.</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace sanding belt (<b>Page 31</b>).</li> <li>2. Raise rear pressure roller (<b>Page 50</b>).</li> <li>3. Increase feed rate (<b>Page 33</b>).</li> <li>4. Raise platen to reduce pressure (<b>Page 32</b>).</li> <li>5. Replace graphite or felt pad (<b>Page 43</b>).</li> <li>6. Use alternate methods to establish material removal amount (<b>Page 30</b>).</li> </ol>
Sanding belt runs off to one side, stopping sander.	<ol style="list-style-type: none"> <li>1. Power connections wired out of phase.</li> <li>2. Airflow adjustment knob closed.</li> <li>3. Belt tracking incorrect.</li> <li>4. Air fork gap/air lines clogged.</li> <li>5. Solenoid valve/air manifold at fault.</li> </ol>	<ol style="list-style-type: none"> <li>1. Correct phase polarity (<b>Page 24</b>).</li> <li>2. Turn valve all the way out, then back in 3½ turns.</li> <li>3. Adjust belt tracking (<b>Page 41</b>).</li> <li>4. Clean air fork gap/air lines.</li> <li>5. Test/repair/replace.</li> </ol>
Poor, non-aggressive sanding results.	<ol style="list-style-type: none"> <li>1. Sanding belt worn/clogged.</li> <li>2. Sanding belt grit too fine for particular job.</li> </ol>	<ol style="list-style-type: none"> <li>1. Clean/replace sanding belt (<b>Page 40 &amp; 31</b>).</li> <li>2. Replace with coarser grit.</li> </ol>
Sanding belt will not start, but conveyor will.	<ol style="list-style-type: none"> <li>1. No air pressure to sander.</li> <li>2. Airflow adjustment valve closed.</li> <li>3. Limit switches engaged.</li> <li>4. Sanding belt not tensioned.</li> </ol>	<ol style="list-style-type: none"> <li>1. Connect sander to compressed air system (<b>Page 19</b>).</li> <li>2. Open airflow adjustment valve.</li> <li>3. Center sanding belt so it is not touching limit switches.</li> <li>4. Tension sanding belt.</li> </ol>
Conveyor belt not tracking in center.	<ol style="list-style-type: none"> <li>1. Conveyor belt moved out of adjustment.</li> </ol>	<ol style="list-style-type: none"> <li>1. Adjust conveyor adjustment bolts (<b>Page 55</b>).</li> </ol>
Conveyor belt slipping.	<ol style="list-style-type: none"> <li>1. Conveyor belt has incorrect tension.</li> <li>2. Conveyor rollers contaminated with dirt or dust.</li> </ol>	<ol style="list-style-type: none"> <li>1. Adjust conveyor belt tension (<b>Page 54</b>).</li> <li>2. Clean conveyor rollers.</li> </ol>
Emergency brake stops slowly.	<ol style="list-style-type: none"> <li>1. Low air pressure.</li> <li>2. Air leaks in system.</li> <li>3. Brake rotor contaminated with oil.</li> <li>4. Brake pads worn.</li> </ol>	<ol style="list-style-type: none"> <li>1. Adjust incoming air pressure to 75 PSI.</li> <li>2. Inspect all hoses and connections for leaking air; use water on suspected area to detect bubbles.</li> <li>3. Clean brake rotor with automotive brake parts cleaner.</li> <li>4. Replace brake pads (<b>Page 44</b>).</li> </ol>
Grinding noise when braking.	<ol style="list-style-type: none"> <li>1. Brake pads severely worn.</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace brake pads (<b>Page 44</b>), have rotor turned/trued by a machine shop. Replace rotor.</li> </ol>
Air leaking from sander.	<ol style="list-style-type: none"> <li>1. Compressed air release typical of pneumatic systems.</li> <li>2. Water filter/trap drain cock left open.</li> <li>3. Air line ruptured or air leaking at a connection point.</li> </ol>	<ol style="list-style-type: none"> <li>1. Unless there is clear evidence of air leak or performance issue with belt oscillation or braking speed, take no action. Air release sound is normal.</li> <li>2. Ensure water filter/trap drain cock is tight.</li> <li>3. Locate source of sound and determine likely cause based on what you visual evidence.</li> </ol>



# Pneumatic System Diagram

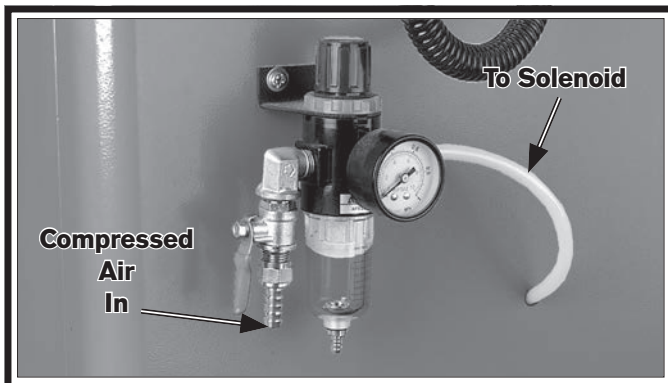
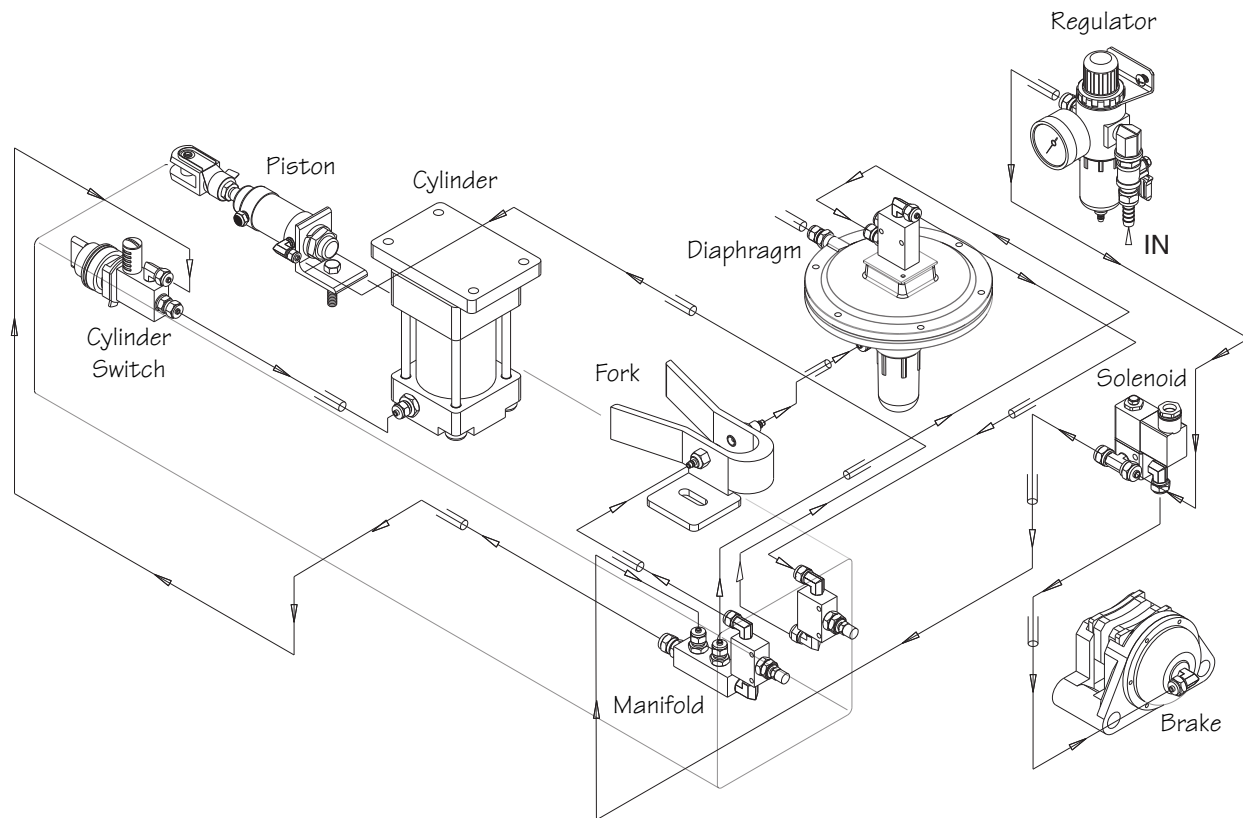


Figure 104. Regulator.

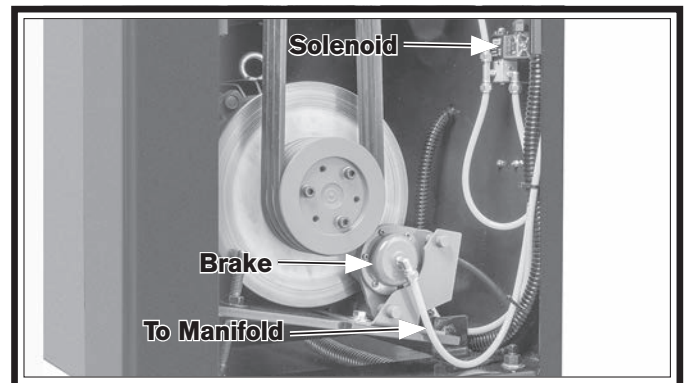


Figure 106. Brake and solenoid.

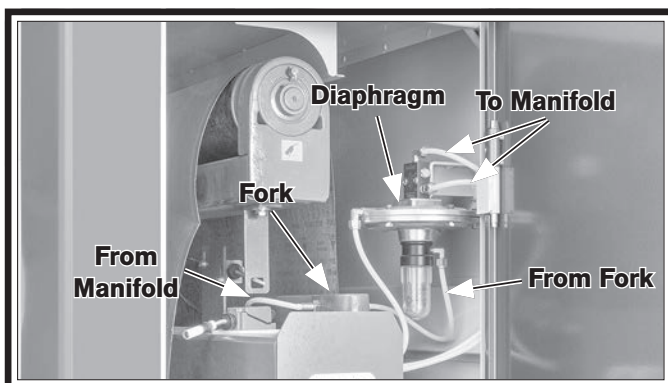


Figure 105. Fork and diaphragm.

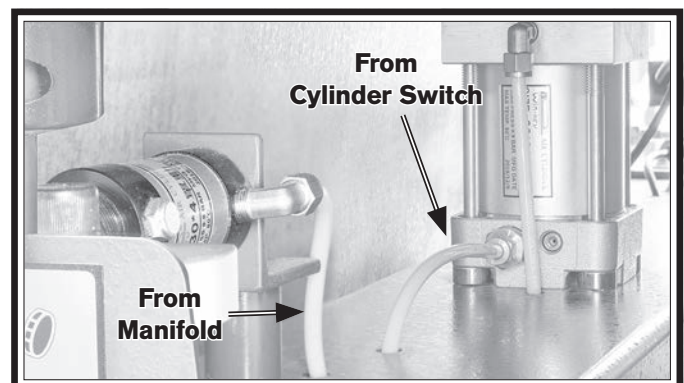


Figure 107. Piston and cylinder.

# Electrical Safety Instructions

These pages are accurate at the time of printing. In the constant effort to improve, however, we may make changes to the electrical systems of future machines. Study this section carefully. If you see differences between your machine and what is shown in this section, call Technical Support at (360) 734-1540 for assistance BEFORE making any changes to the wiring on your machine.

**Shock Hazard:** It is extremely dangerous to perform electrical or wiring tasks while the machine is connected to the power source. Touching electrified parts will result in personal injury including but not limited to severe burns, electrocution, or death. For your own safety, disconnect machine from the power source before servicing electrical components or performing any wiring tasks!

**Wire Connections:** All connections must be tight to prevent wires from loosening during machine operation. Double-check all wires disconnected or connected during any wiring task to ensure tight connections.

**Modifications:** Using aftermarket parts or modifying the wiring beyond what is shown in the diagram may lead to unpredictable results, including serious injury or fire.

**Motor Wiring:** The motor wiring shown in these diagrams is current at the time of printing, but it may not match your machine. Always use the wiring diagram inside the motor junction box.

**Circuit Requirements:** Connecting the machine to an improperly sized circuit will greatly increase the risk of fire. To minimize this risk, only connect the machine to a power circuit that meets the minimum requirements given in this manual.

**Capacitors/Inverters:** Some capacitors and power inverters store an electrical charge for up to 10 minutes after being disconnected from the power source. To reduce the risk of being shocked, wait at least this long before working on capacitors.

**Wire/Component Damage:** Damaged wires or components increase the risk of serious personal injury, fire, or machine damage. If you notice that any wires or components are damaged while performing a wiring task, replace those wires or components before completing the task.

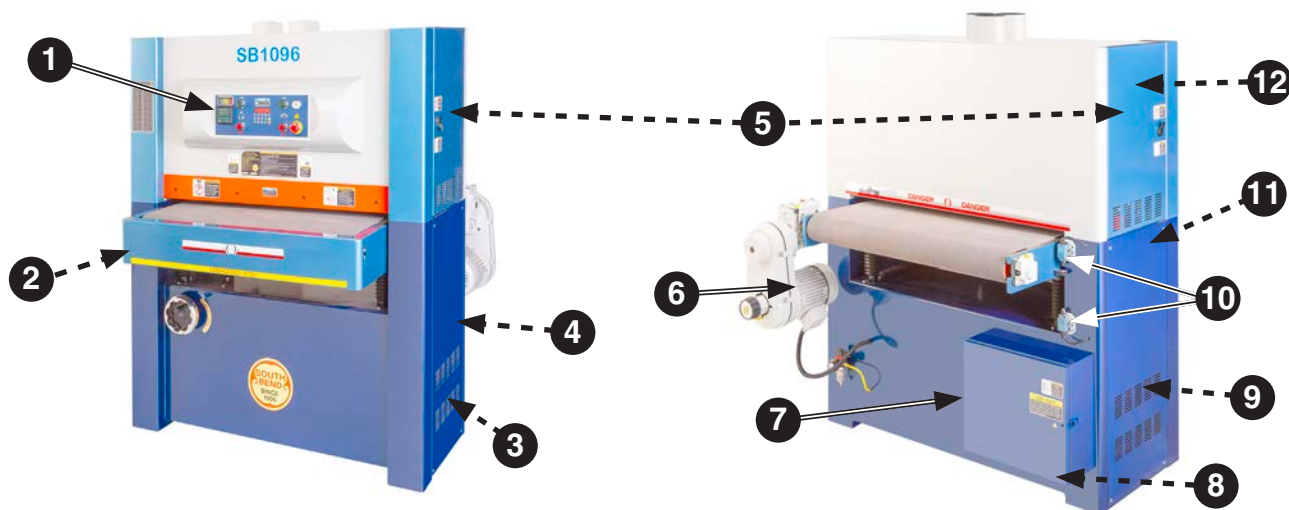
**Experiencing Difficulties:** If you are experiencing difficulties understanding the information included in this section, contact our Technical Support at (360) 734-1540.

## WIRING DIAGRAM COLOR KEY

BLACK — Bk	BLUE WHITE — Bw	RED — Rd	PINK — Pk	WHITE — Wt
BLUE — Bl	GREEN — Gn	LIGHT BLUE — Lb	PURPLE — Pu	YELLOW GREEN — Yg
BROWN — Br	GRAY — Gy	ORANGE — Or	TURQUOISE — Tu	YELLOW — Yl

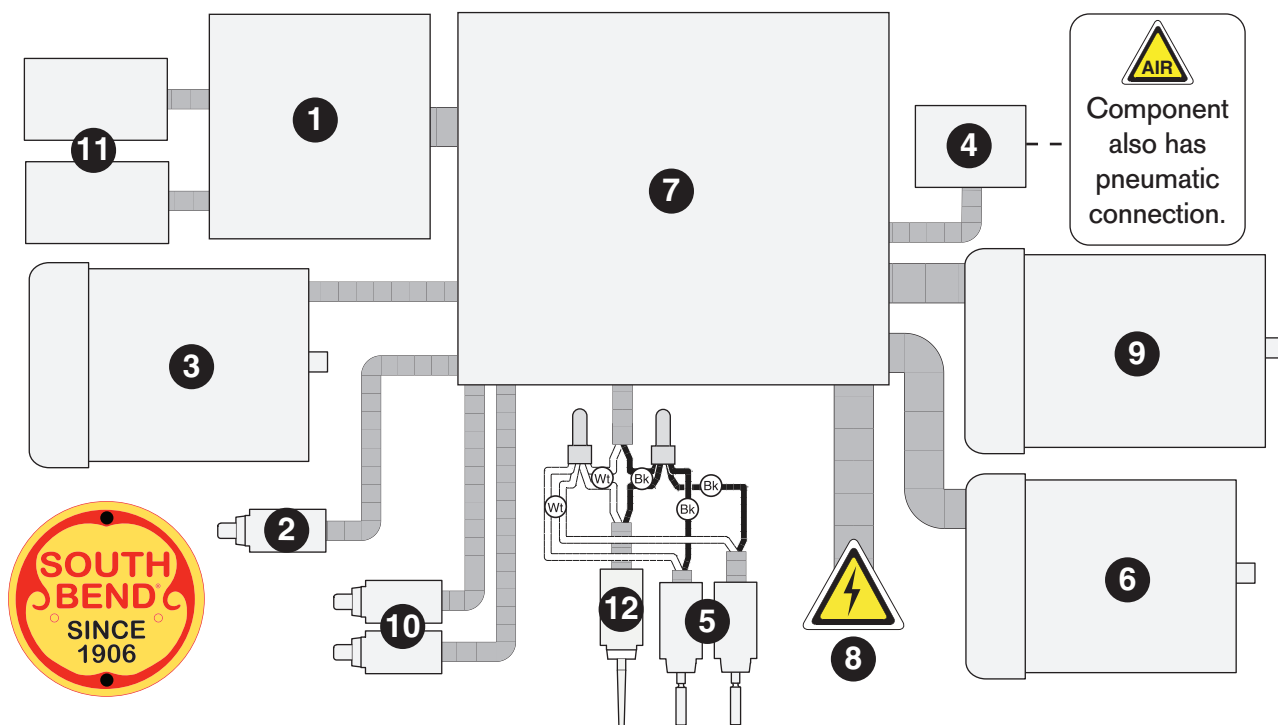
**NOTICE:** The photos and diagrams included in this section are best viewed in color. You can see them in color at [www.southbendlathe.com](http://www.southbendlathe.com).

# Electrical Overview

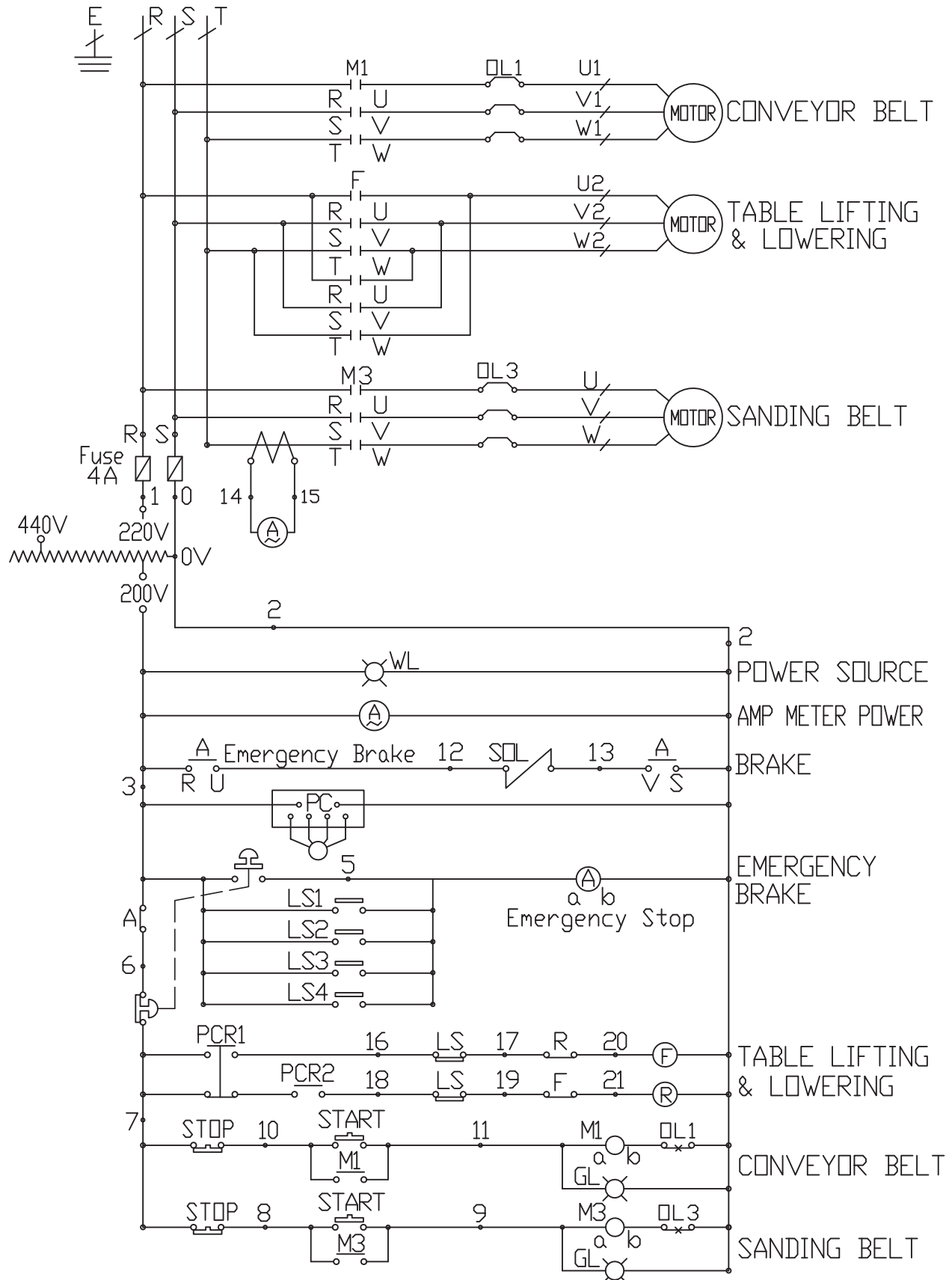


<b>1</b>	Control Panel ( <b>Page 69</b> )
<b>2</b>	EMERGENCY STOP Plate Limit Switch ( <b>Page 72</b> )
<b>3</b>	Main Motor ( <b>Page 70</b> )
<b>4</b>	Air Pressure Limit Switch & Solenoid ( <b>Page 71</b> )
<b>5</b>	Sanding Belt Tracking Limit Switches ( <b>Page 72</b> )
<b>6</b>	Conveyor Feed Motor ( <b>Page 70</b> )

<b>7</b>	Electrical Cabinet ( <b>Page 67 &amp; 68</b> )
<b>8</b>	Power Supply Input ( <b>Page 66</b> )
<b>9</b>	Table Elevation Motor ( <b>Page 71</b> )
<b>10</b>	Table Elevation Limit Switches ( <b>Page 72</b> )
<b>11</b>	Table Elevation Sensors ( <b>Page 69</b> )
<b>12</b>	Sanding Belt Tension Limit Switch ( <b>Page 72</b> )



# Electrical System Schematic





# Electrical Cabinet

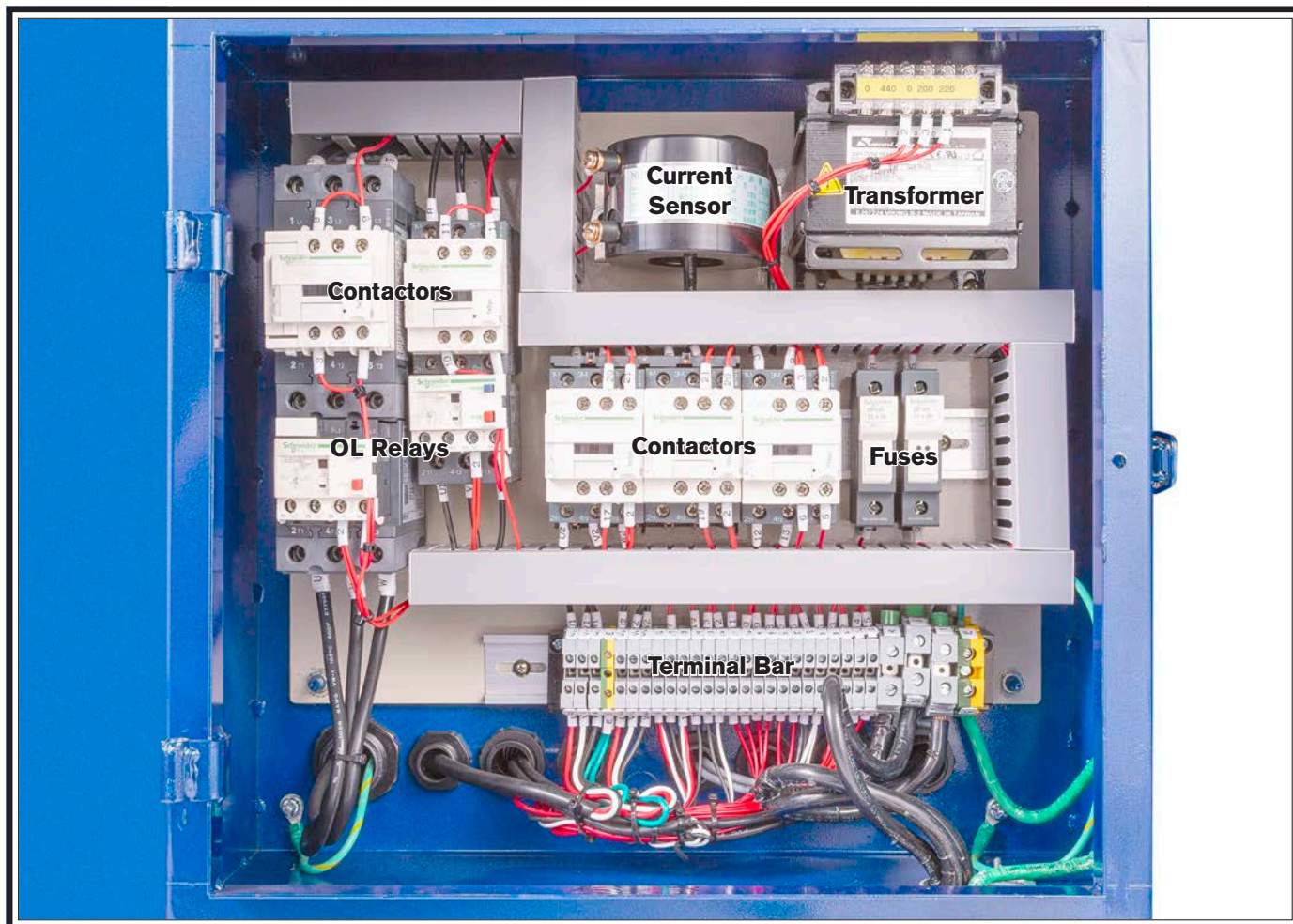
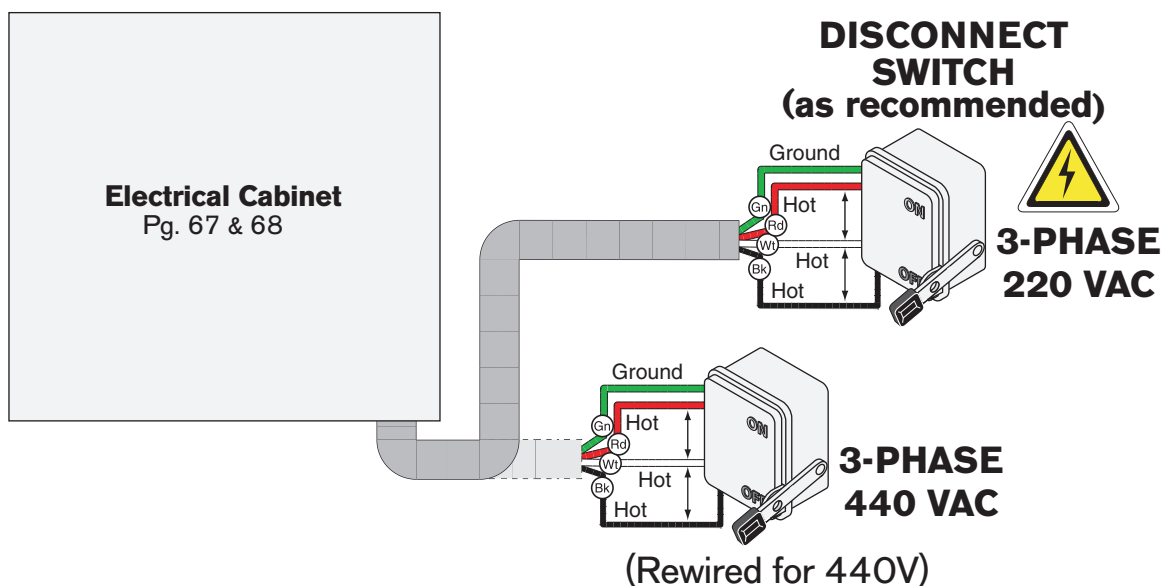
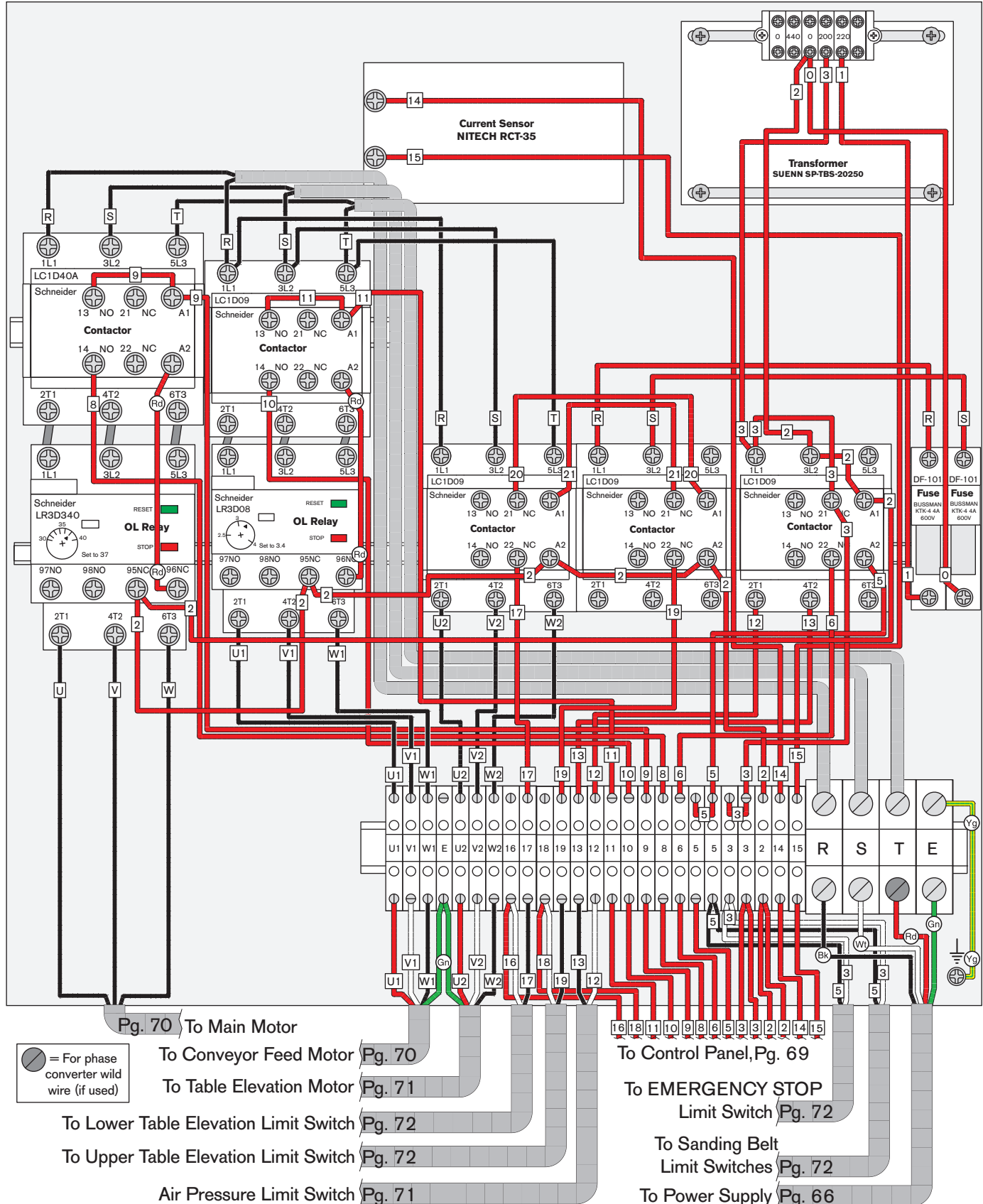


Figure 108. Electrical cabinet.



# Electrical Cabinet Wiring Diagram (220V)

## ELECTRICAL CABINET



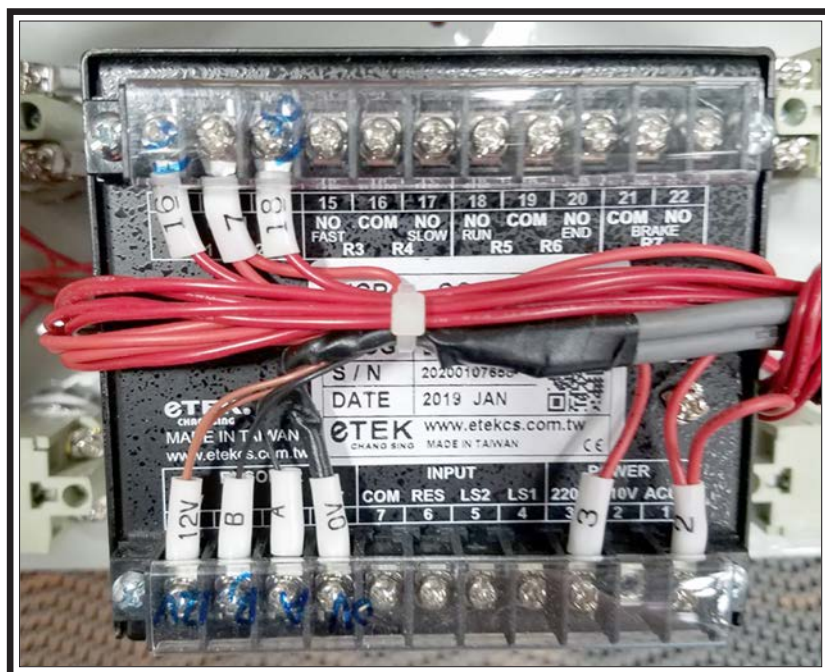
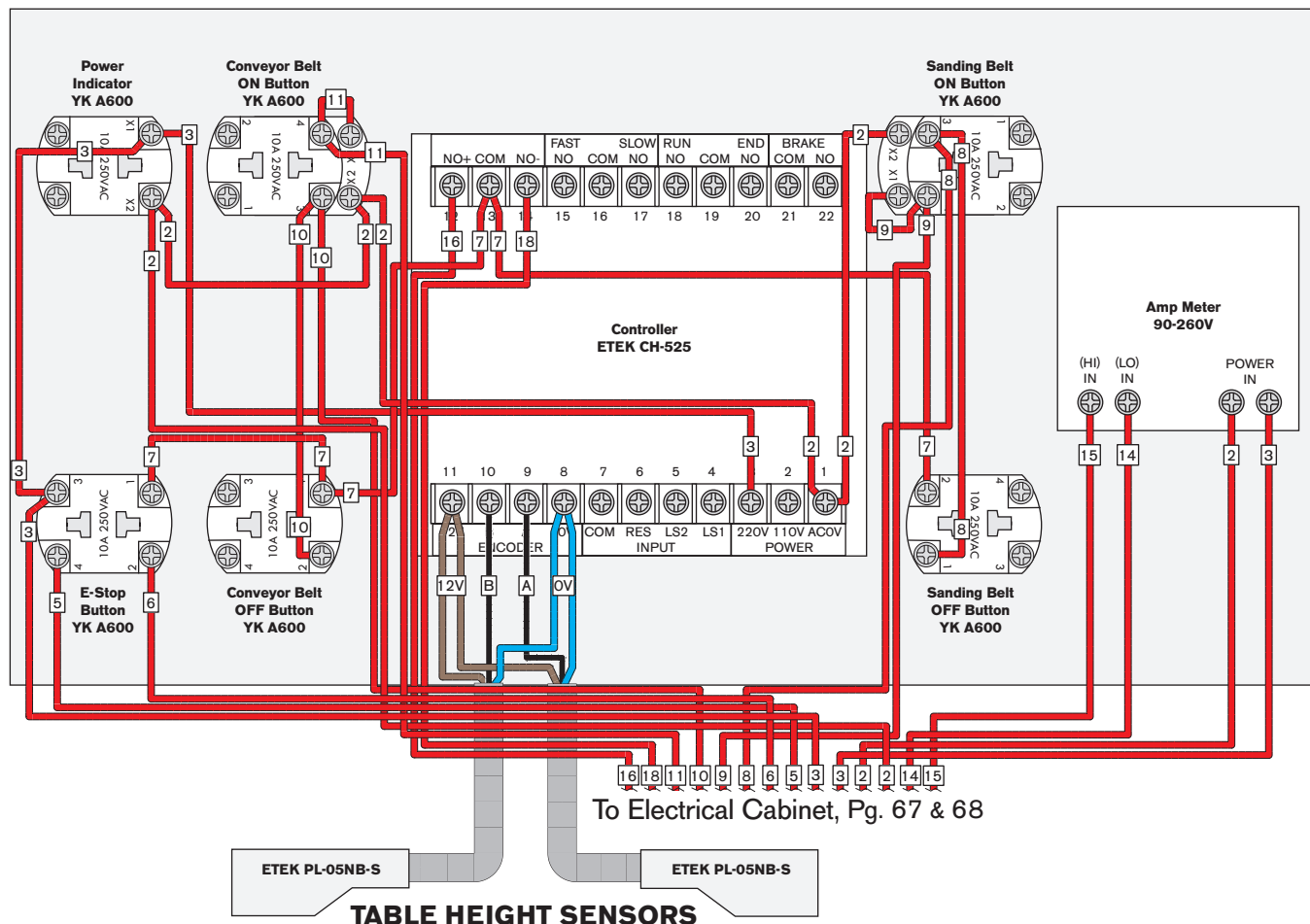
## ELECTRICAL CABINET





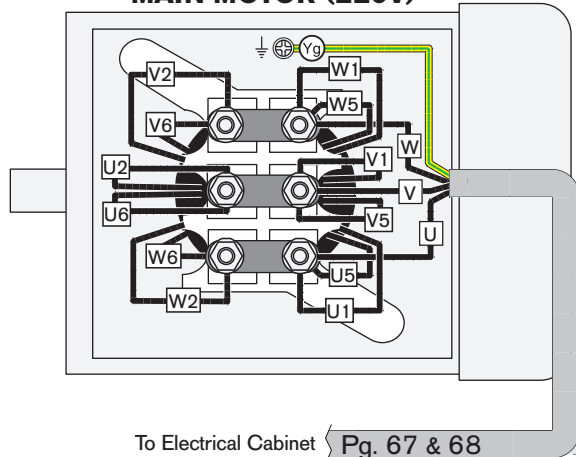
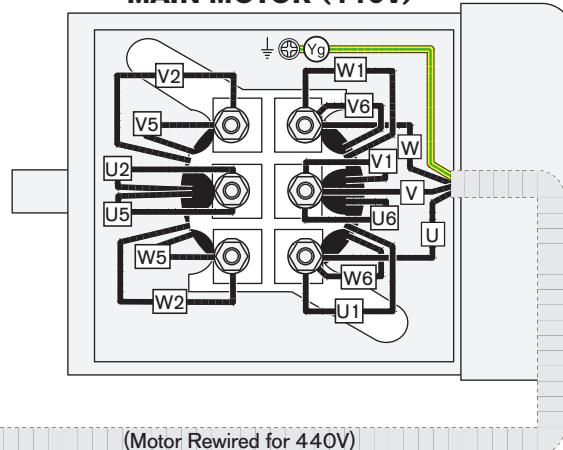
# Control Panel Wiring

## CONTROL PANEL BACK

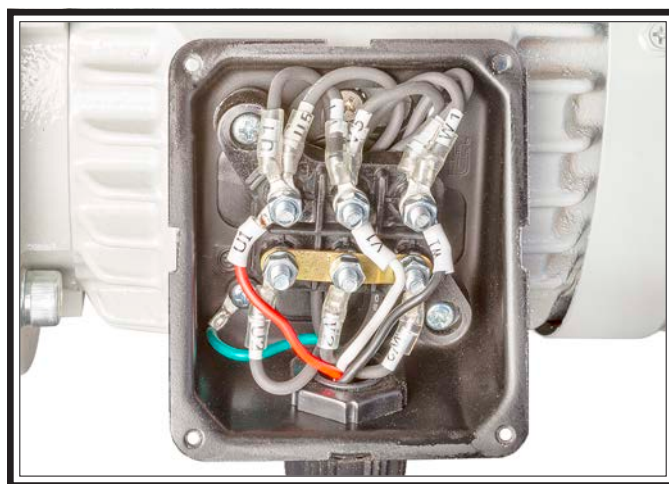




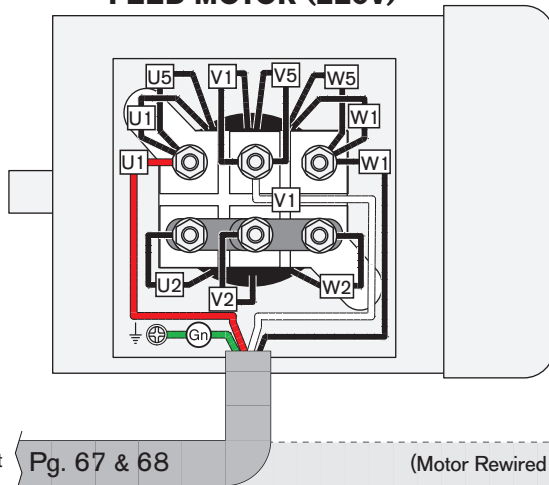
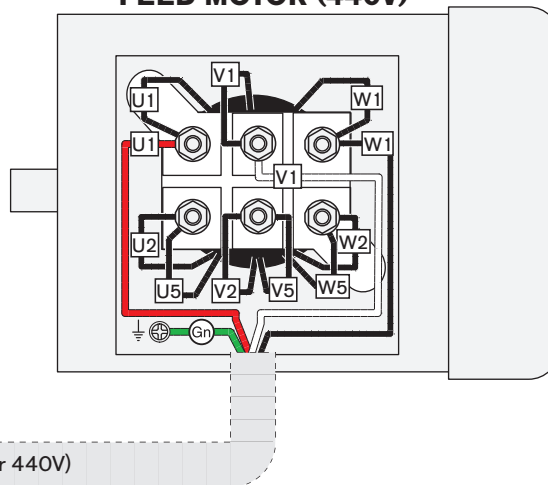
# Main Motor & Conveyor Feed Motor Wiring

**MAIN MOTOR (220V)****MAIN MOTOR (440V)**

**Figure 111. Main motor junction box (shown wired for 220V operation).**



**Figure 112. Feed motor junction box (shown wired for 220V operation).**

**FEED MOTOR (220V)****FEED MOTOR (440V)**

# Table Elevation Motor Wiring

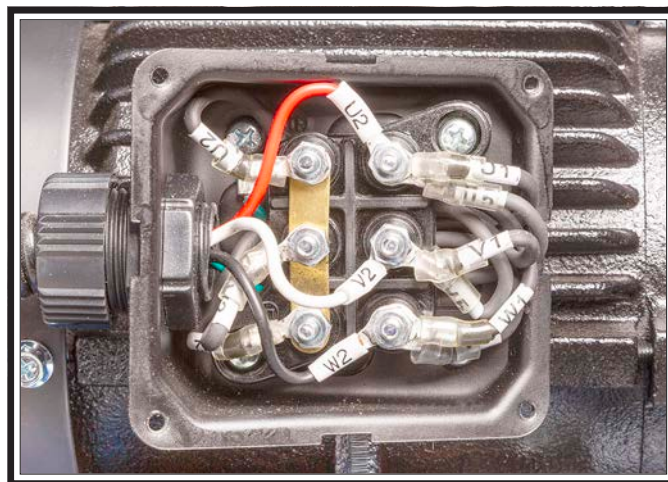
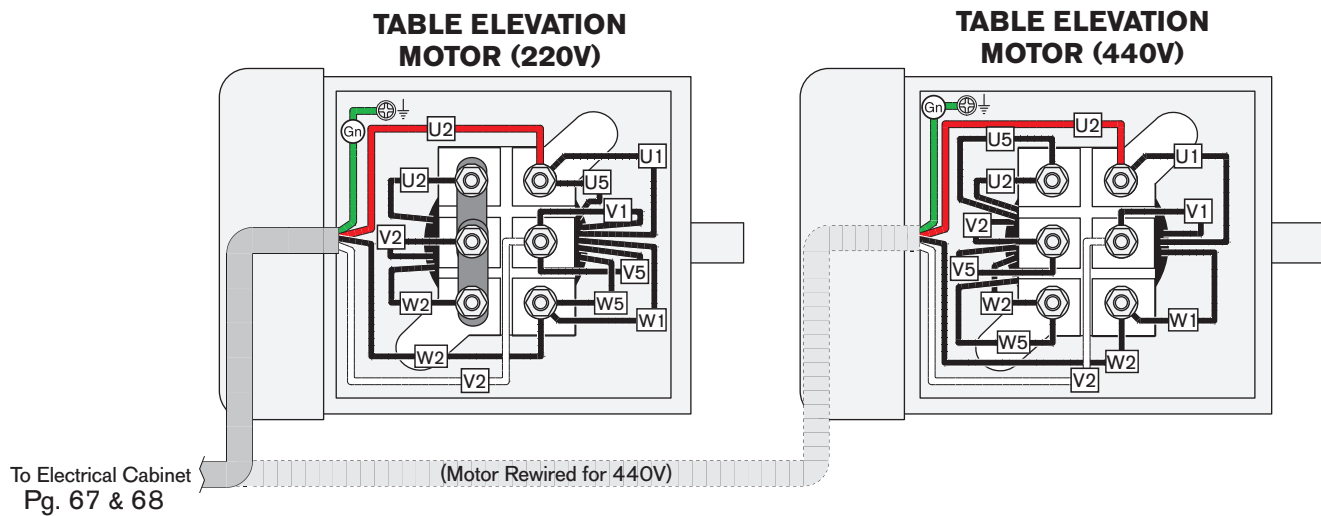


Figure 113. Table elevation motor junction box (shown wired for 220V operation).

## Air Pressure Limit Switch Wiring

To Electrical Cabinet  
Pg. 67 & 68

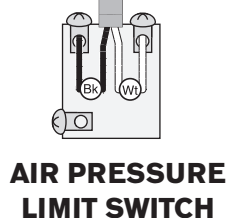


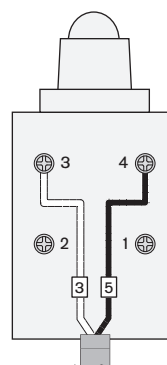
Figure 114. Air pressure limit switch.

# Sanding Belt & Table Limit Switch Wiring



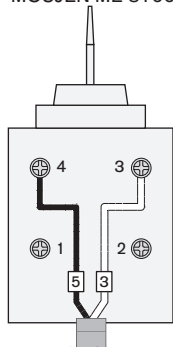
**Figure 115. EMERGENCY STOP plate limit switch (hidden behind safety guard).**

**EMERGENCY STOP Plate  
Limit Switch**  
TEND TZ-5101

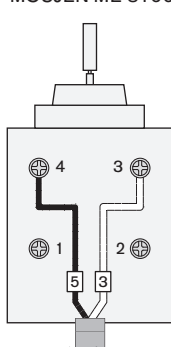


To Electrical Cabinet  
Pg. 67 & 68

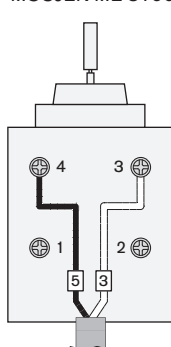
**Sanding Belt  
Tension  
Limit Switch**  
MOUJEN ME-8166



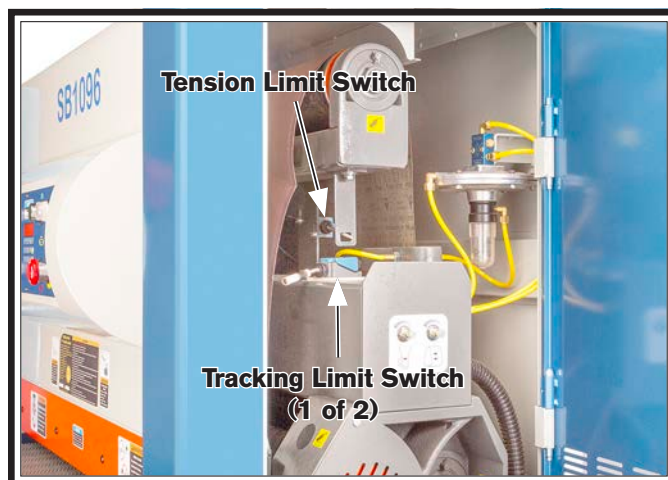
**Sanding Belt  
Tracking (Left)  
Limit Switch**  
MOUJEN ME-8166



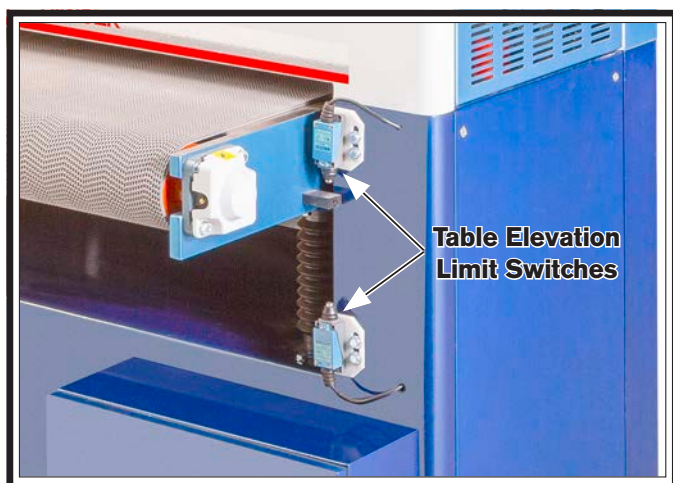
**Sanding Belt  
Tracking (Right)  
Limit Switch**  
MOUJEN ME-8166



To Electrical Cabinet  
Pg. 67 & 68

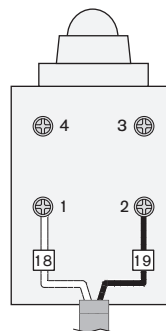


**Figure 117. Belt tension and tracking limit switches.**

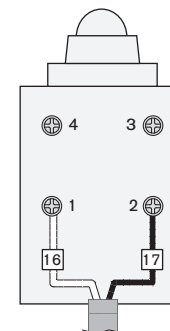


**Figure 116. Table elevation limit switches.**

**Upper  
Table Elevation  
Limit Switch**  
MOUJEN ME-8111

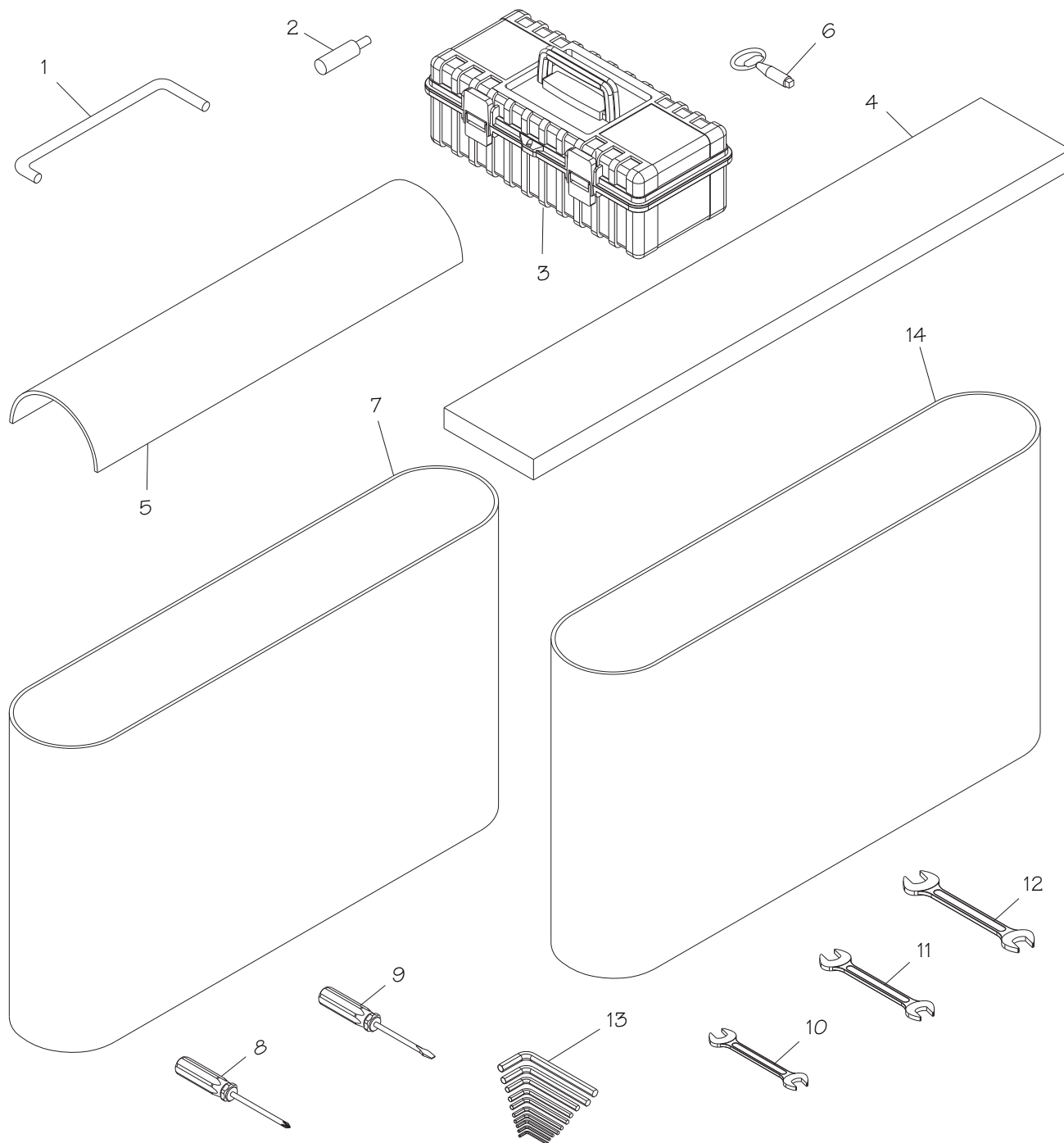


**Lower  
Table Elevation  
Limit Switch**  
MOUJEN ME-8111



To Electrical Cabinet  
Pg. 67 & 68

# Tool Box & Accessories

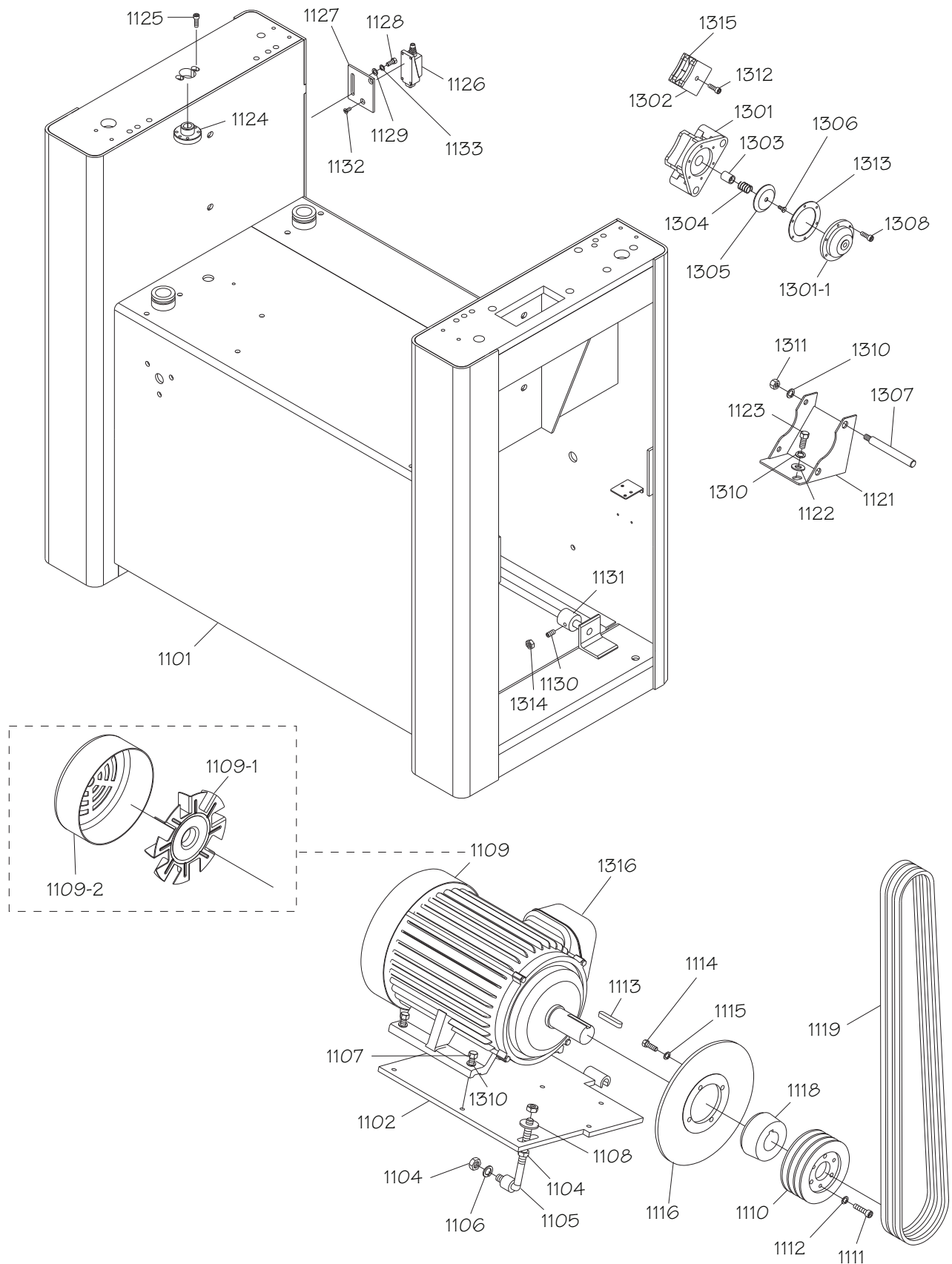


REF	PART #	DESCRIPTION
1	PSB10960001	PLATEN REMOVAL TOOL
2	PSB10960002	LIMIT SWITCH TIP
3	PSB10960003	TOOL BOX
4	PSB10960004	FELT PAD 37-3/4" X 1-3/4" X 3/8"
5	PSB10960005	GRAPHITE PAD 37-3/4" X 3-1/2"
6	PSB10960006	DOOR KEY
7	PSB10960007	SANDING BELT 37" X 60" 100-GRIT

REF	PART #	DESCRIPTION
8	PSB10960008	PHILLIPS SCREWDRIVER #2
9	PSB10960009	FLAT SCREWDRIVER #2
10	PSB10960010	WRENCH 8 X 10MM OPEN-ENDS
11	PSB10960011	WRENCH 12 X 14MM OPEN-ENDS
12	PSB10960012	WRENCH 17 X 19MM OPEN-ENDS
13	PSB10960013	HEX WRENCH SET 1.5-10MM 10PC
14	PSB10960014	SANDING BELT 37" X 60" 180-GRIT



# Sanding Motor System

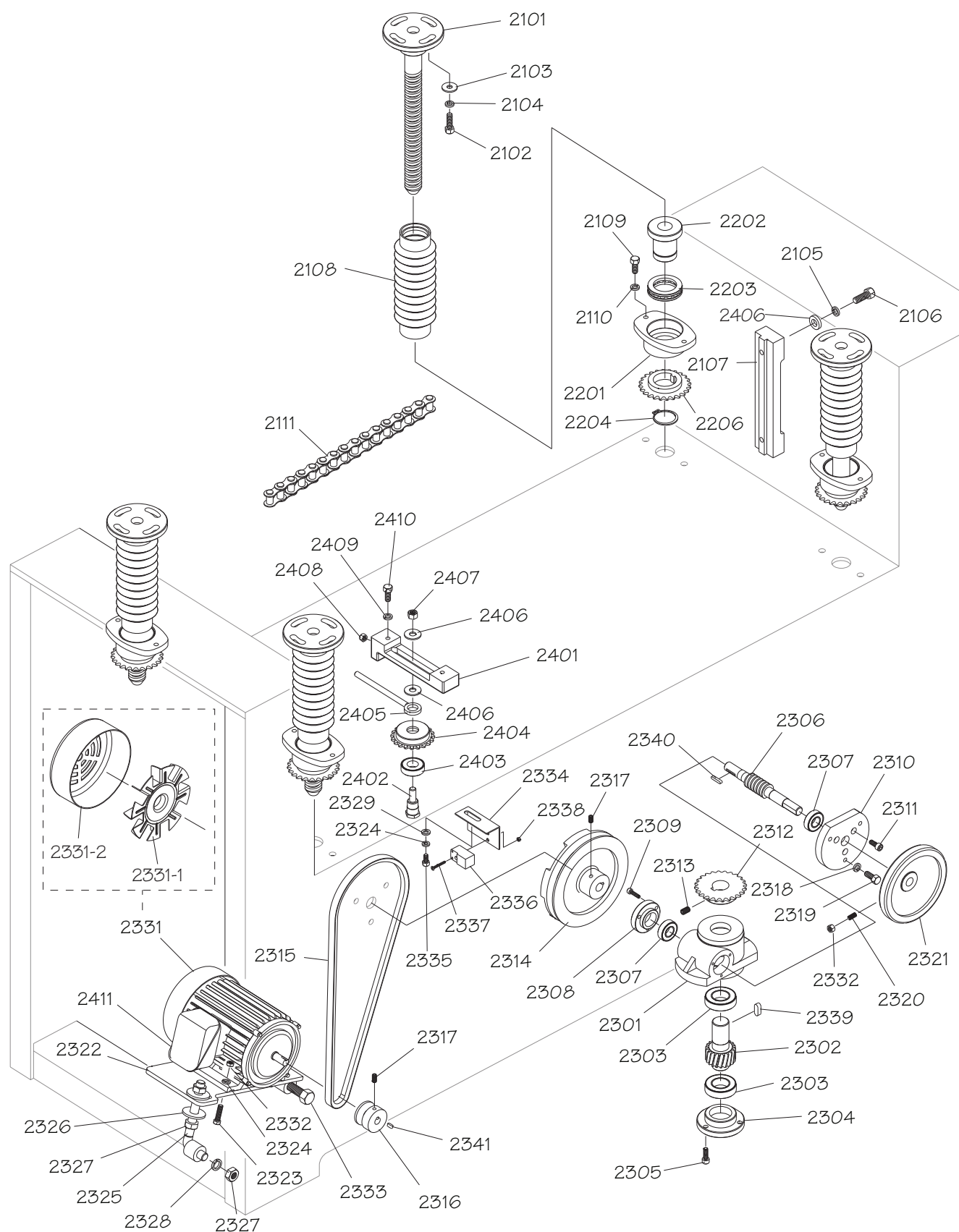


# Sanding Motor System Parts List

REF	PART #	DESCRIPTION
1101	PSB10961101	MACHINE FRAME
1102	PSB10961102	MOTOR MOUNTING PLATE
1104	PSB10961104	HEX NUT 1/2-12
1105	PSB10961105	BELT TENSION ADJUSTMENT ROD
1106	PSB10961106	LOCK WASHER 1/2
1107	PSB10961107	HEX BOLT 3/8-16 X 1-1/4
1108	PSB10961108	FLAT WASHER 1/2
1109	PSB10961109	MOTOR 15HP 220V/440V 3-PH
1109-1	PSB10961109-1	MOTOR FAN
1109-2	PSB10961109-2	MOTOR FAN COVER
1110	PSB10961110	MAIN MOTOR PULLEY
1111	PSB10961111	CAP SCREW 5/16-18 X 1-1/4
1112	PSB10961112	LOCK WASHER 5/16
1113	PSB10961113	KEY 8 X 10 X 75
1114	PSB10961114	HEX BOLT 5/16-18 X 1
1115	PSB10961115	LOCK WASHER 5/16
1116	PSB10961116	BRAKE ROTOR
1118	PSB10961118	BUSHING 38 X 80 X 34
1119	PSB10961119	V-BELT A71
1121	PSB10961121	BRAKE BRACKET
1122	PSB10961122	FLAT WASHER 3/8
1123	PSB10961123	HEX BOLT 3/8-16 X 3/4
1124	PSB10961124	FLANGED BUSHING 2" X 1"
1125	PSB10961125	CAP SCREW 1/4-20 X 3/4

REF	PART #	DESCRIPTION
1126	PSB10961126	LIMIT SWITCH MOUJEN ME-8111
1127	PSB10961127	LIMIT SWITCH PLATE
1128	PSB10961128	HEX BOLT 1/4-20 X 1/2
1129	PSB10961129	FLAT WASHER 1/4
1130	PSB10961130	SET SCREW 5/16-18 X 3/4
1131	PSB10961131	LOCK COLLAR
1132	PSB10961132	FLAT HD SCR M6-1 X 25
1133	PSB10961133	LOCK WASHER 1/4
1301	PSB10961301	BRAKE CALIPER
1301-1	PSB10961301-1	BRAKE CALIPER FRONT GUARD
1302	PSB10961302	INNER BRAKE PAD
1303	PSB10961303	BRAKE ARBOR
1304	PSB10961304	COMPRESSION SPRING 22 X 25
1305	PSB10961305	BRAKE MOUNTING PLATE
1306	PSB10961306	FLAT HD SCR 1/4-20 X 1/2
1307	PSB10961307	STUD-SE M14-2 X 125, 13
1308	PSB10961308	CAP SCREW M5-.8 X 15
1310	PSB10961310	LOCK WASHER 3/8
1311	PSB10961311	HEX NUT 3/8-16
1312	PSB10961312	CAP SCREW 1/4-20 X 5/8
1313	PSB10961313	BRAKE CALIPER GASKET
1314	PSB10961314	HEX NUT 5/16-18
1315	PSB10961315	OUTER BRAKE PAD
1316	PSB10961316	MAIN MOTOR JUNCTION BOX

# Table Lift System



# Table Lift System Parts List

REF	PART #	DESCRIPTION
2101	PSB10962101	ELEVATION SCREW 1 X 5 X 280
2102	PSB10962102	HEX BOLT 5/16-18 X 1
2103	PSB10962103	FLAT WASHER 5/16
2104	PSB10962104	LOCK WASHER 5/16
2105	PSB10962105	LOCK WASHER 3/8
2106	PSB10962106	HEX BOLT 3/8-16 X 1
2107	PSB10962107	ELEVATION SLIDE
2108	PSB10962108	ELEVATION SCREW DUST BOOT
2109	PSB10962109	HEX BOLT 5/16-18 X 3/4
2110	PSB10962110	LOCK WASHER 5/16
2111	PSB10962111	ELEVATION SCREW CHAIN
2201	PSB10962201	NUT HOUSING
2202	PSB10962202	COLUMN NUT
2203	PSB10962203	THRUST BEARING 51107
2204	PSB10962204	EXT RETAINING RING 35MM
2206	PSB10962206	SPROCKET 35T
2301	PSB10962301	ELEVATION GEAR BOX
2302	PSB10962302	WORM GEAR
2303	PSB10962303	BALL BEARING 6005Z
2304	PSB10962304	WORM GEAR BEARING CAP
2305	PSB10962305	CAP SCREW 1/4-20 X 3/4
2306	PSB10962306	WORM SHAFT
2307	PSB10962307	BALL BEARING 6002Z
2308	PSB10962308	GEARBOX BEARING CAP
2309	PSB10962309	CAP SCREW 10-24 X 5/8
2310	PSB10962310	HANDWHEEL BEARING CAP
2311	PSB10962311	CAP SCREW 1/4-20 X 5/8
2312	PSB10962312	SPROCKET 25T
2313	PSB10962313	SET SCREW 5/16-18 X 1/2
2314	PSB10962314	TABLE PULLEY
2315	PSB10962315	V-BELT A37
2316	PSB10962316	TABLE ELEVATION MOTOR PULLEY
2317	PSB10962317	SET SCREW 1/4-20 X 1/2
2318	PSB10962318	LOCK WASHER 5/16

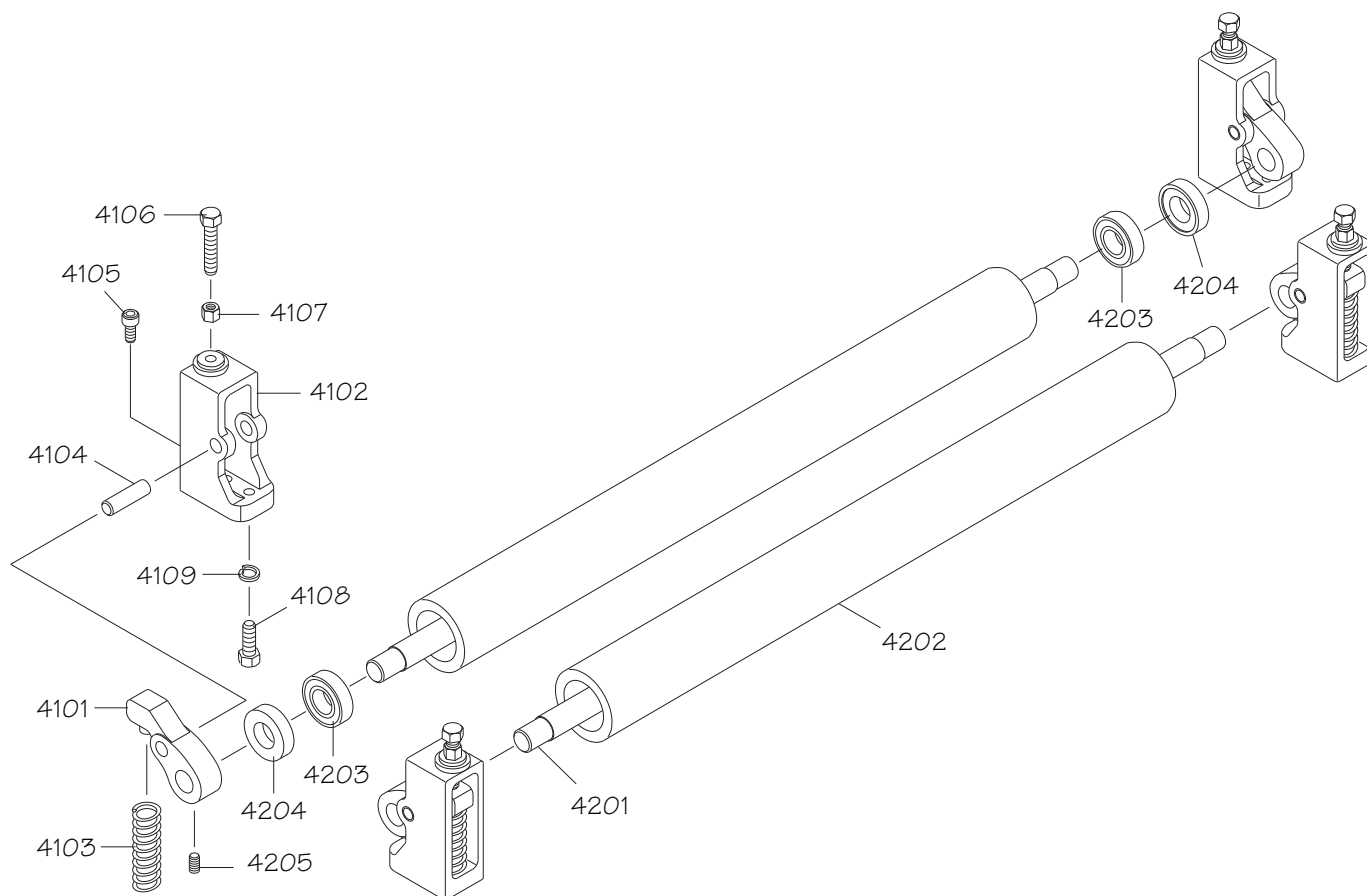
REF	PART #	DESCRIPTION
2319	PSB10962319	HEX BOLT 5/16-18 X 3/4
2320	PSB10962320	SET SCREW 1/4-20 X 1/2
2321	PSB10962321	HANDWHEEL TYPE-10 165D X 14B
2322	PSB10962322	MOTOR MOUNTING PLATE
2323	PSB10962323	HEX BOLT 1/4-20 X 1
2324	PSB10962324	LOCK WASHER 1/4
2325	PSB10962325	BELT TENSION ADJUSTMENT ROD
2326	PSB10962326	FLAT WASHER 1/2
2327	PSB10962327	HEX NUT 1/2-12
2328	PSB10962328	LOCK WASHER 1/2
2331	PSB10962331	MOTOR 1/4HP 220V/440V 3-PH
2331-1	PSB10962331-1	MOTOR FAN
2331-2	PSB10962331-2	MOTOR FAN COVER
2332	PSB10962332	HEX NUT 1/4-20
2333	PSB10962333	HEX BOLT 1/2-12 X 4-1/2
2334	PSB10962334	PROXIMITY SWITCH PLATE
2335	PSB10962335	HEX BOLT 1/4-20 X 1/2
2336	PSB10962336	PROXIMITY SWITCH ETEK PL-05NB-S
2337	PSB10962337	FLAT HD SCR M3-.5 X 35
2338	PSB10962338	HEX NUT M3-.5
2339	PSB10962339	KEY 8 X 8 X 20 RE
2340	PSB10962340	KEY 4 X 4 X 20 RE
2341	PSB10962341	KEY 4 X 4 X 16 RE
2401	PSB10962401	CHAIN TENSIONING BLOCK
2402	PSB10962402	SPROCKET SHAFT
2403	PSB10962403	BALL BEARING 6003ZZ
2404	PSB10962404	SPROCKET 35T
2405	PSB10962405	CHAIN TENSION ADJUSTMENT ROD
2406	PSB10962406	FLAT WASHER 3/8
2407	PSB10962407	HEX NUT 3/8-16
2408	PSB10962408	HEX NUT 5/16-18
2409	PSB10962409	LOCK WASHER 5/16
2410	PSB10962410	HEX BOLT 5/16-18 X 3/4
2411	PSB10962411	TABLE ELEVATION MOTOR JUNCTION BOX



This exploded perspective view illustrates the assembly of a fan unit. The components are labeled with reference numerals 3101 through 3144. The assembly includes a main housing (3101) with a fan blade (3102) attached to a motor (3103). The motor is connected to a power source (3104) via a cable (3105). The fan blade is secured by a nut (3106) and a washer (3107). The motor is mounted on a base (3108) using screws (3109, 3110, 3111). The base is further secured by a bracket (3112) and a screw (3113). The fan blade is also secured by a bracket (3114) and a screw (3115). The fan blade is further secured by a bracket (3116) and a screw (3117). The fan blade is further secured by a bracket (3118) and a screw (3119). The fan blade is further secured by a bracket (3120) and a screw (3121). The fan blade is further secured by a bracket (3122) and a screw (3123). The fan blade is further secured by a bracket (3124) and a screw (3125). The fan blade is further secured by a bracket (3126) and a screw (3127). The fan blade is further secured by a bracket (3128) and a screw (3129). The fan blade is further secured by a bracket (3130) and a screw (3131). The fan blade is further secured by a bracket (3132) and a screw (3133). The fan blade is further secured by a bracket (3134) and a screw (3135). The fan blade is further secured by a bracket (3136) and a screw (3137). The fan blade is further secured by a bracket (3138) and a screw (3139). The fan blade is further secured by a bracket (3140) and a screw (3141). The fan blade is further secured by a bracket (3142) and a screw (3143). The fan blade is further secured by a bracket (3144) and a screw (3145).

REF	PART #	DESCRIPTION
3126	PSB10963126	V-BELT 1422V-290
3127	PSB10963127	HEX BOLT M10-1.5 X 25
3128	PSB10963128	SPEED UNIT BASE PLATE
3129	PSB10963129	SPEED UNIT COVER
3130	PSB10963130	HEX BOLT M8-1.25 X 20
3131	PSB10963131	INFEED ROLLER BRACKET (RH)
3132	PSB10963132	CAP SCREW 3/8-16 X 3/4
3133	PSB10963133	INFEED ROLLER BRACKET (LH)
3135	PSB10963135	CONVEYOR BELT POSITION WHEEL
3136	PSB10963136	CAP SCREW 5/16-18 X 2
3137	PSB10963137	LOCK WASHER 5/16
3138	PSB10963138	HEX NUT 5/16-18
3140	PSB10963140	CONVEYOR BELT FRONT COVER
3141	PSB10963141	PHLP HD SCR 1/4-20 X 1/2
3142	PSB10963142	LIMIT SWITCH TEND TZ-5101
3143	PSB10963143	PHLP HD SCR 10-24 X 1-1/2
3144	PSB10963144	HEX BOLT 1/2-13 X 3
3201	PSB10963201	FRONT CONVEYOR ROLLER SHAFT
3202	PSB10963202	FRONT CONVEYOR ROLLER
3203	PSB10963203	BALL BEARING 6206-2RS
3204	PSB10963204	EXT RETAINING RING 30MM
3205	PSB10963205	ELEVATION LIMIT BLOCK
3206	PSB10963206	CAP SCREW 1/4-20 X 1/2
3207	PSB10963207	CONVEYOR FEED MOTOR JUNCTION BOX
3208	PSB10963208	FLAT WASHER #10

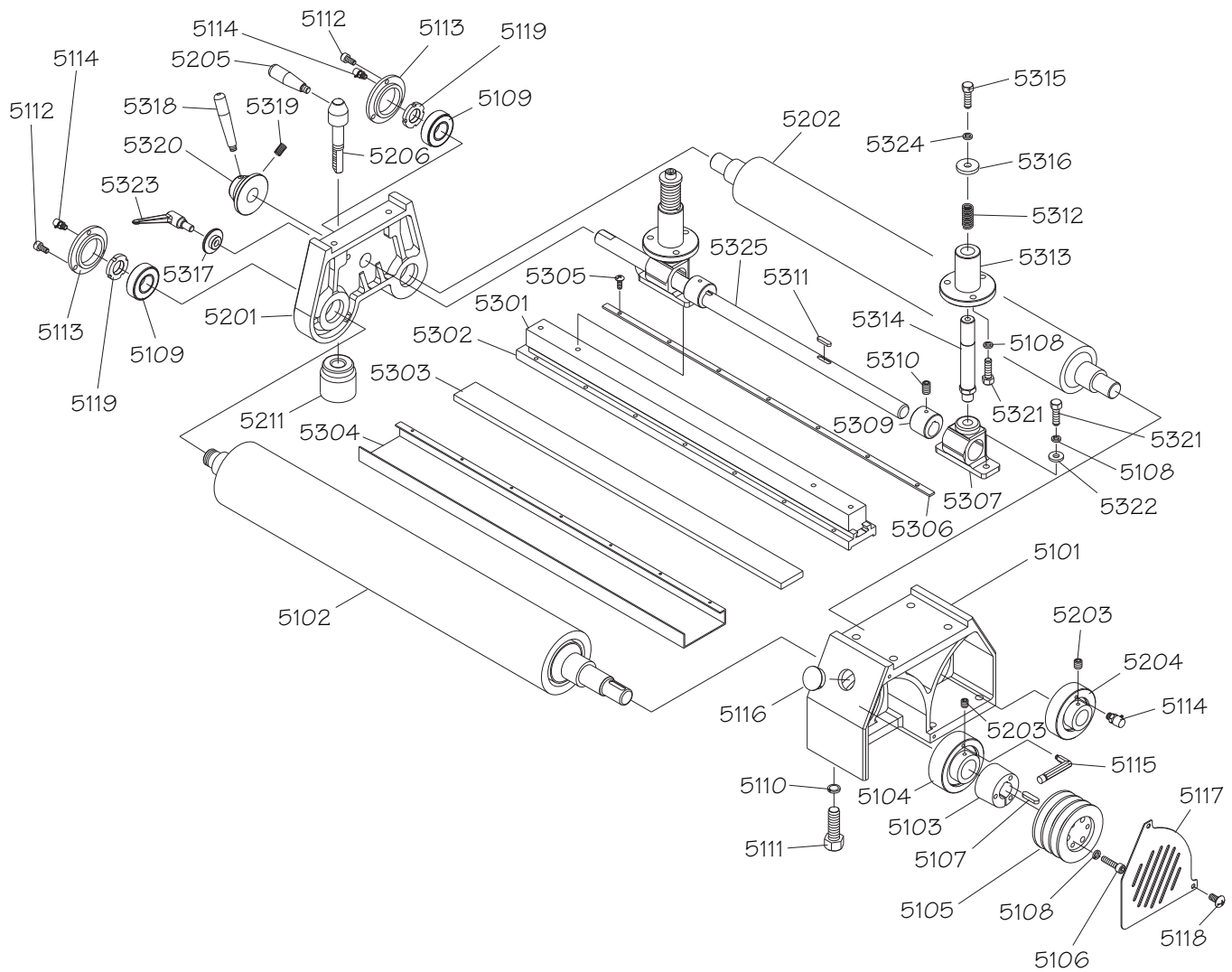
# Feed Roller



REF	PART #	DESCRIPTION
4101	PSB10964101	OUTER PISTON BRACKET
4102	PSB10964102	INNER PISTON BRACKET
4103	PSB10964103	COMPRESSION SPRING 3 X 15.6 X 57
4104	PSB10964104	PIN 10 X 35MM
4105	PSB10964105	CAP SCREW 1/4-20 x 1/2
4106	PSB10964106	HEX BOLT 5/16-18 x 1-1/4
4107	PSB10964107	HEX NUT 5/16-18

REF	PART #	DESCRIPTION
4108	PSB10964108	HEX BOLT 5/16-18 x 1-1/4
4109	PSB10964109	LOCK WASHER 5/16
4201	PSB10964201	PRESSURE ROLLER SHAFT
4202	PSB10964202	PRESSURE ROLLER
4203	PSB10964203	BALL BEARING 6001ZZ
4204	PSB10964204	SHAFT BEARING COLLAR
4205	PSB10964205	SET SCREW 1/4-20 x 3/8

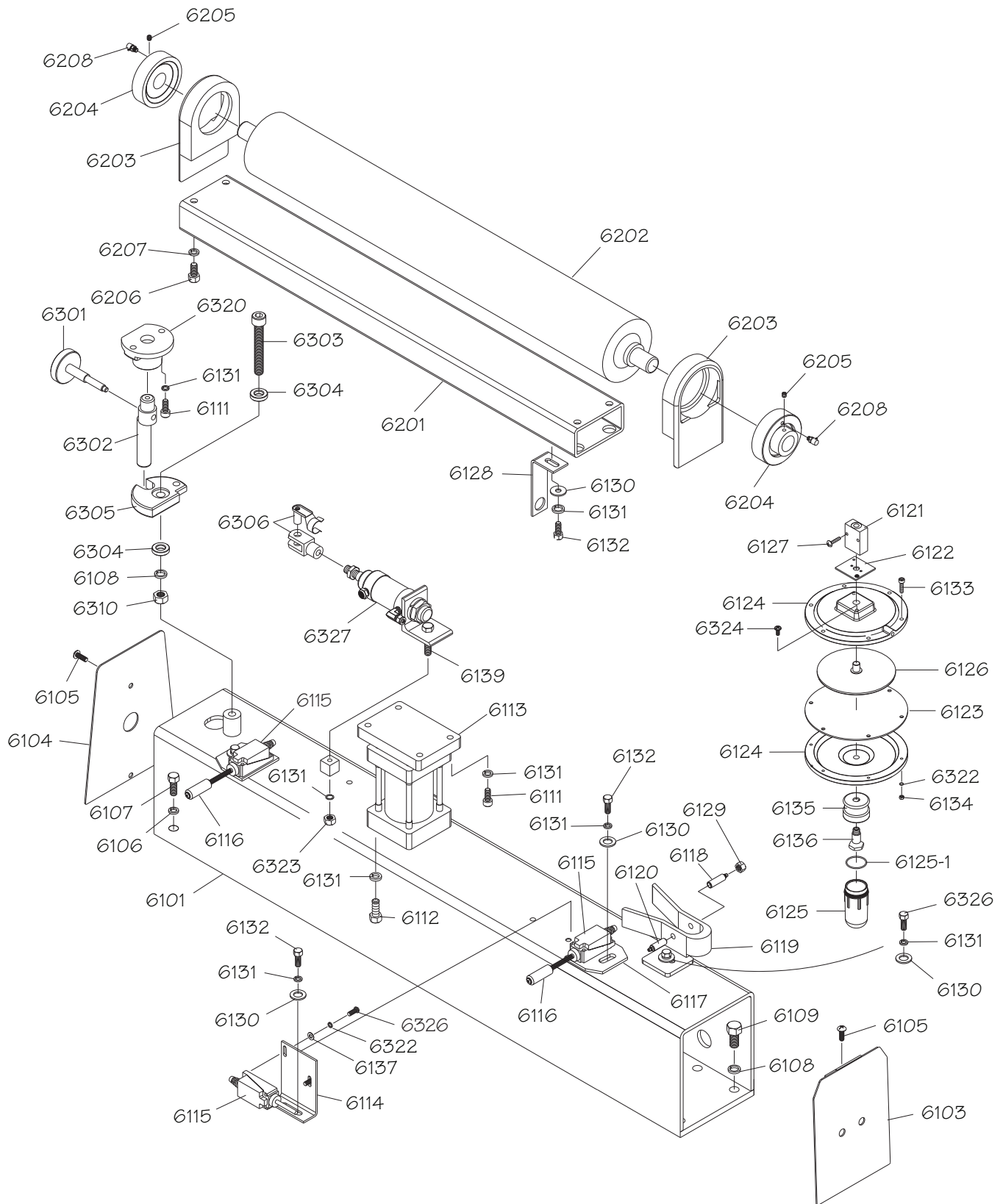
# Sanding Drum



# Sanding Drum Parts List

REF	PART #	DESCRIPTION	REF	PART #	DESCRIPTION
5101	PSB10965101	BEARING HOUSING (RH)	5211	PSB10965211	BRACKET PAD 50 X 53.5
5102	PSB10965102	RUBBER ROLLER	5301	PSB10965301	GRAPHITE BRACKET (MALE)
5103	PSB10965103	FASTENING TUBE	5302	PSB10965302	GRAPHITE BRACKET (FEMALE)
5104	PSB10965104	PILLOW BEARING UCC206	5303	PSB10965303	FELT PLATEN PAD
5105	PSB10965105	SANDING DRUM PULLEY	5304	PSB10965304	PLATEN GRAPHITE
5106	PSB10965106	CAP SCREW 5/16-18 X 1-1/4	5305	PSB10965305	PHLP HD SCR 10-24 X 1/2
5107	PSB10965107	KEY 5/16 X 5/16 X 1-3/16 RE	5306	PSB10965306	GRAPHITE RETAINER PLATE
5108	PSB10965108	LOCK WASHER 5/16	5307	PSB10965307	PLATEN BRACKET
5109	PSB10965109	BALL BEARING 6205-2RS	5309	PSB10965309	LOCK COLLAR
5110	PSB10965110	LOCK WASHER 1/2	5310	PSB10965310	SET SCREW 1/4-20 X 3/8
5111	PSB10965111	HEX BOLT 1/2-13 X 1-1/2	5311	PSB10965311	KEY 5 X 5 X 20 RE
5112	PSB10965112	CAP SCREW 1/4-20 X 1/2	5312	PSB10965312	COMPRESSION SPRING 3 X 27 X 60
5113	PSB10965113	SANDING DRUM BEARING CAP	5313	PSB10965313	PLATEN HEIGHT SHAFT HOUSING
5114	PSB10965114	GREASE FITTING 1/8PT 67.5-DEG	5314	PSB10965314	PLATEN HEIGHT SHAFT
5115	PSB10965115	GREASE FITTING EXTENSION 1/8PT 90-DEG	5315	PSB10965315	HEX BOLT 3/8-16 X 3/4
5116	PSB10965116	BEARING HOUSING PLUG	5316	PSB10965316	FLAT WASHER 3/8
5117	PSB10965117	PULLEY COVER	5317	PSB10965317	CENTERING WASHER 1-1/2 X 10
5118	PSB10965118	PHLP HD SCR 1/4-20 X 3/8	5318	PSB10965318	FIXED HANDLE 3/8-16 X 5/16
5119	PSB10965119	BEARING RETAINING NUT M38-16	5319	PSB10965319	SET SCREW 5/16-18 X 1/2
5201	PSB10965201	BEARING HOUSING (LH)	5320	PSB10965320	GRADUATED COLLAR
5202	PSB10965202	STEEL ROLLER	5321	PSB10965321	HEX BOLT 5/16-18 X 1
5203	PSB10965203	SET SCREW M6-1 X 6	5322	PSB10965322	FLAT WASHER 5/16
5204	PSB10965204	PILLOW BEARING UCC205	5323	PSB10965323	ADJUSTABLE HANDLE 3/8-16 X 1, 2-1/2L
5205	PSB10965205	FIXED HANDLE 3/8-16 X 3/8	5324	PSB10965324	LOCK WASHER 3/8
5206	PSB10965206	HANDLE SCREW 25 X 125	5325	PSB10965325	PLATEN SUPPORT SHAFT

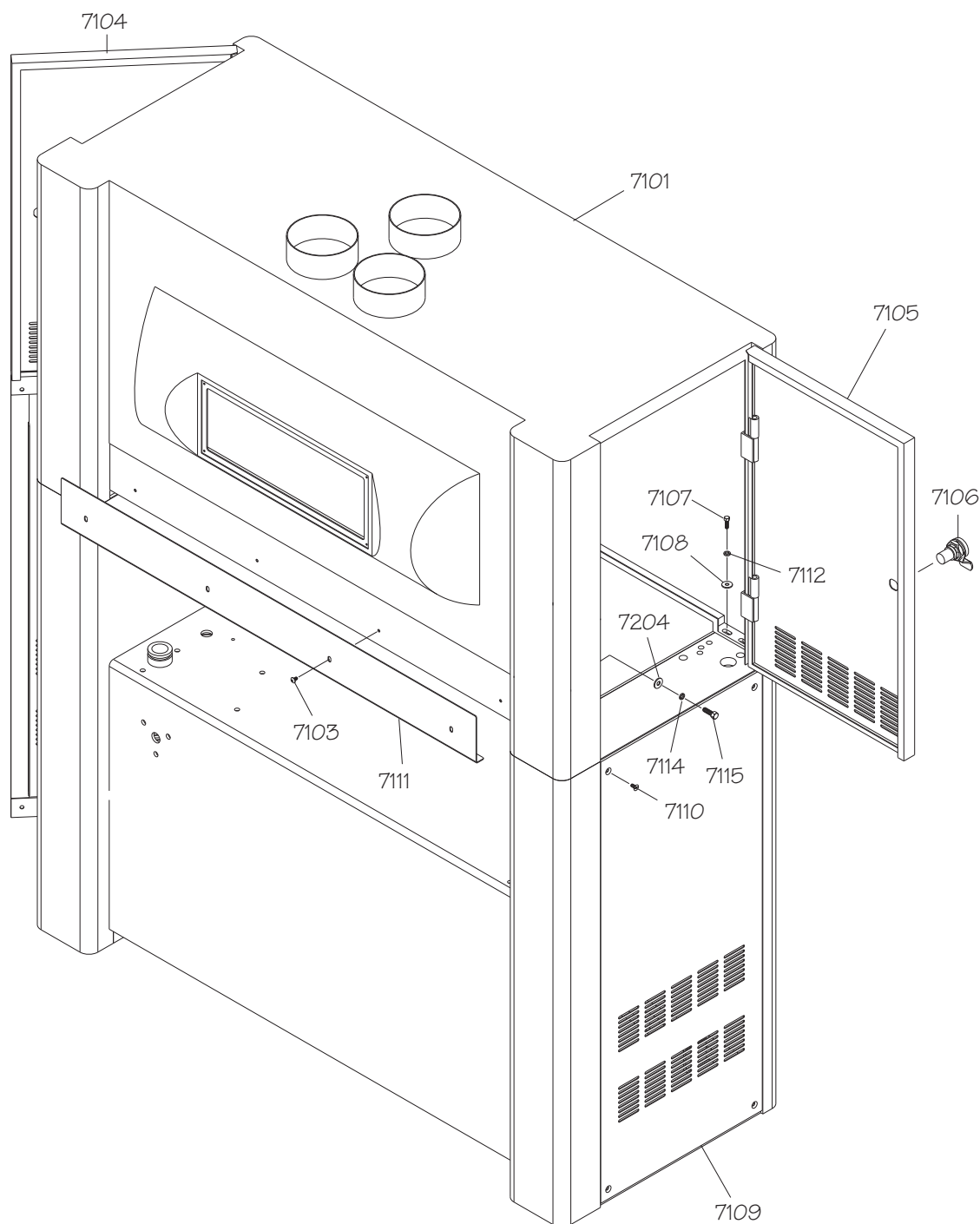




# Upper Roller System Parts List

REF	PART #	DESCRIPTION	REF	PART #	DESCRIPTION
6101	PSB10966101	SQUARE FRAME	6131	PSB10966131	LOCK WASHER 5/16
6103	PSB10966103	SQUARE FRAME SEAL (RIGHT)	6132	PSB10966132	HEX BOLT 5/16-18 X 3/4
6104	PSB10966104	SQUARE FRAME SEAL (LEFT)	6133	PSB10966133	CAP SCREW 10-24 X 3/4
6105	PSB10966105	FLAT HD SCR 1/4-20 X 1/2	6134	PSB10966134	HEX NUT 10-24
6106	PSB10966106	LOCK WASHER 3/8	6135	PSB10966135	DUST TRAP CONNECTOR
6107	PSB10966107	HEX BOLT 3/8-16 X 1	6136	PSB10966136	DUST TRAP SHAFT
6108	PSB10966108	LOCK WASHER 1/2	6137	PSB10966137	FLAT WASHER 5MM
6109	PSB10966109	HEX BOLT 1/2-13 X 1	6139	PSB10966139	HEX BOLT 5/16-18 X 1-1/2
6111	PSB10966111	CAP SCREW 5/16-18 X 3/4	6201	PSB10966201	UPPER ROLLER MOUNTING BAR
6112	PSB10966112	HEX BOLT M8-1.25 X 20	6202	PSB10966202	UPPER ROLLER
6113	PSB10966113	BELT TENSION AIR CYLINDER	6203	PSB10966203	UPPER ROLLER BRACKET
6114	PSB10966114	LIMIT SWITCH MOUNTING BRACKET	6204	PSB10966204	CARTRIDGE BEARING UCC205
6115	PSB10966115	LIMIT SWITCH MOUJEN ME-8166	6205	PSB10966205	SET SCREW M6-1 X 6
6116	PSB10966116	LIMIT SWITCH TIP	6206	PSB10966206	CAP SCREW 3/8-16 X 3/4
6117	PSB10966117	LIMIT SWITCH MOUNTING BRACKET	6207	PSB10966207	LOCK WASHER 3/8
6118	PSB10966118	AIR FORK JET	6208	PSB10966208	GREASE FITTING 1/4-28, 1/16
6119	PSB10966119	AIR FORK	6301	PSB10966301	OSCILLATION ADJUSTMENT KNOB
6120	PSB10966120	AIR FORK RECEIVER	6302	PSB10966302	ECCENTRIC ROD
6121	PSB10966121	THROTTLE VALVE	6303	PSB10966303	CAP SCREW 1/2-13 X 3-1/2
6122	PSB10966122	THROTTLE VALVE BASE	6304	PSB10966304	FLAT WASHER 1/2
6123	PSB10966123	DIAPHRAGM	6305	PSB10966305	ECCENTRIC CAM
6124	PSB10966124	ALUMINUM DISC HOUSING	6306	PSB10966306	UNIVERSAL JOINT FORK ASSY
6125	PSB10966125	DUST TRAP BOWL	6310	PSB10966310	HEX NUT 1/2-12
6125-1	PSB10966125-1	O-RING 26.7 X 1.78	6320	PSB10966320	ECCENTRIC SHAFT FRAME
6126	PSB10966126	ALUMINUM PLATE	6322	PSB10966322	LOCK WASHER #10
6127	PSB10966127	PHLP HD SCR M4-.7 X 20	6323	PSB10966323	HEX NUT 5/16-18
6128	PSB10966128	LIMIT SWITCH SHUTDOWN BRACKET	6324	PSB10966324	PLHP HD SCR M3-.5 X 12
6129	PSB10966129	HEX NUT 3/8-24	6326	PSB10966326	PHLP HD SCR M5-.8 X 10
6130	PSB10966130	FLAT WASHER 5/16	6327	PSB10966327	OSCILLATION AIR CYLINDER 30 X 4

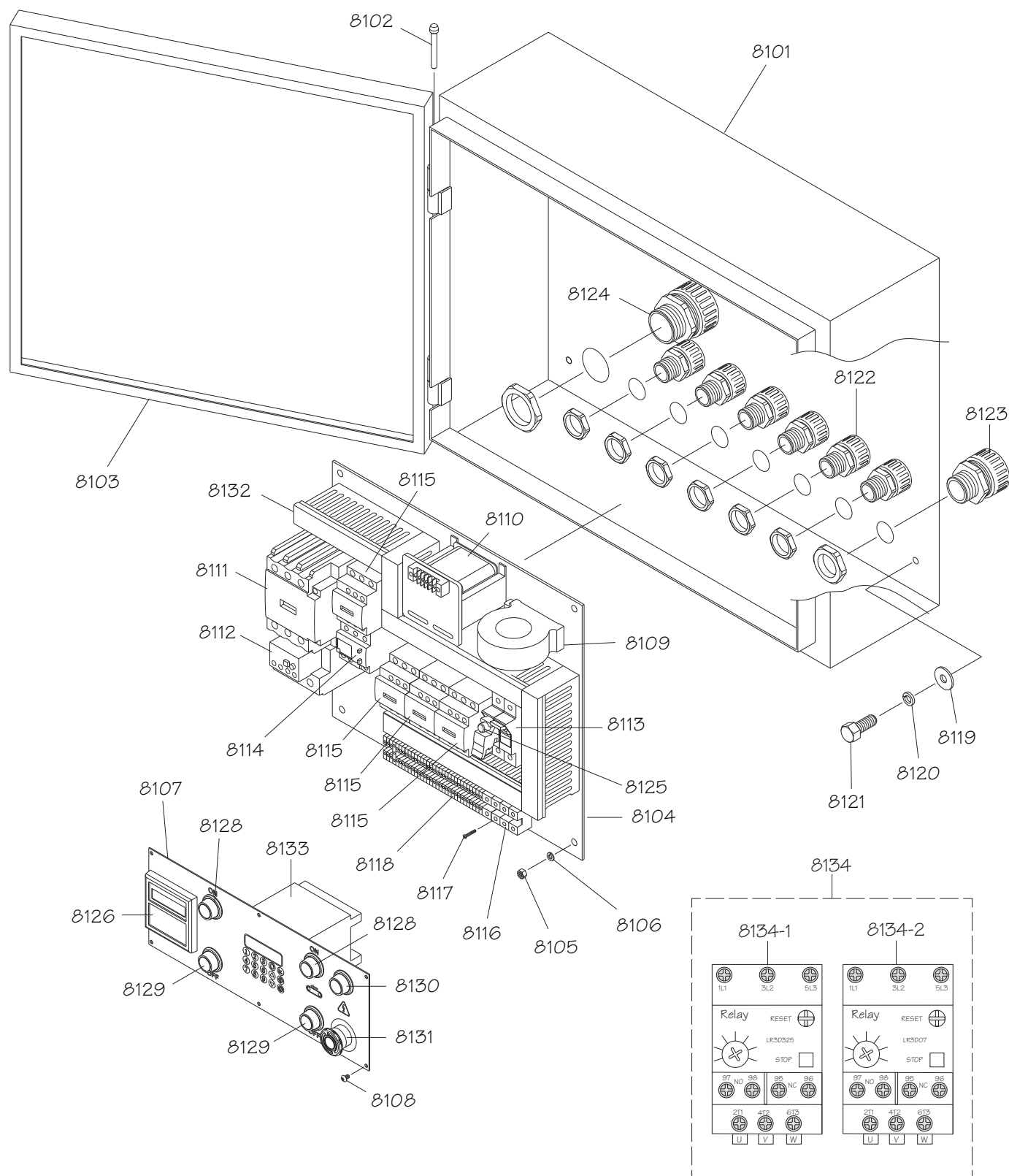
# Cabinet Assembly



REF	PART #	DESCRIPTION
7101	PSB10967101	UPPER FRAME COVER
7103	PSB10967103	PHLP HD SCR M6-1 X 12
7104	PSB10967104	LEFT DOOR
7105	PSB10967105	RIGHT DOOR
7106	PSB10967106	DOOR LOCK
7107	PSB10967107	HEX BOLT 5/16-18 X 3/4
7108	PSB10967108	FLATWASHER 5/16

REF	PART #	DESCRIPTION
7109	PSB10967109	CABINET ACCESS PANEL
7110	PSB10967110	FLAT HD SCR 1/4-20 X 1/2
7111	PSB10967111	DEPTH LIMITER PLATE
7112	PSB10967112	LOCK WASHER 5/16
7114	PSB10967114	LOCK WASHER 1/4
7115	PSB10967115	HEX BOLT 1/4-20 X 1
7204	PSB10967204	FLATWASHER 1/4

# Electrical Cabinet & Control Panel

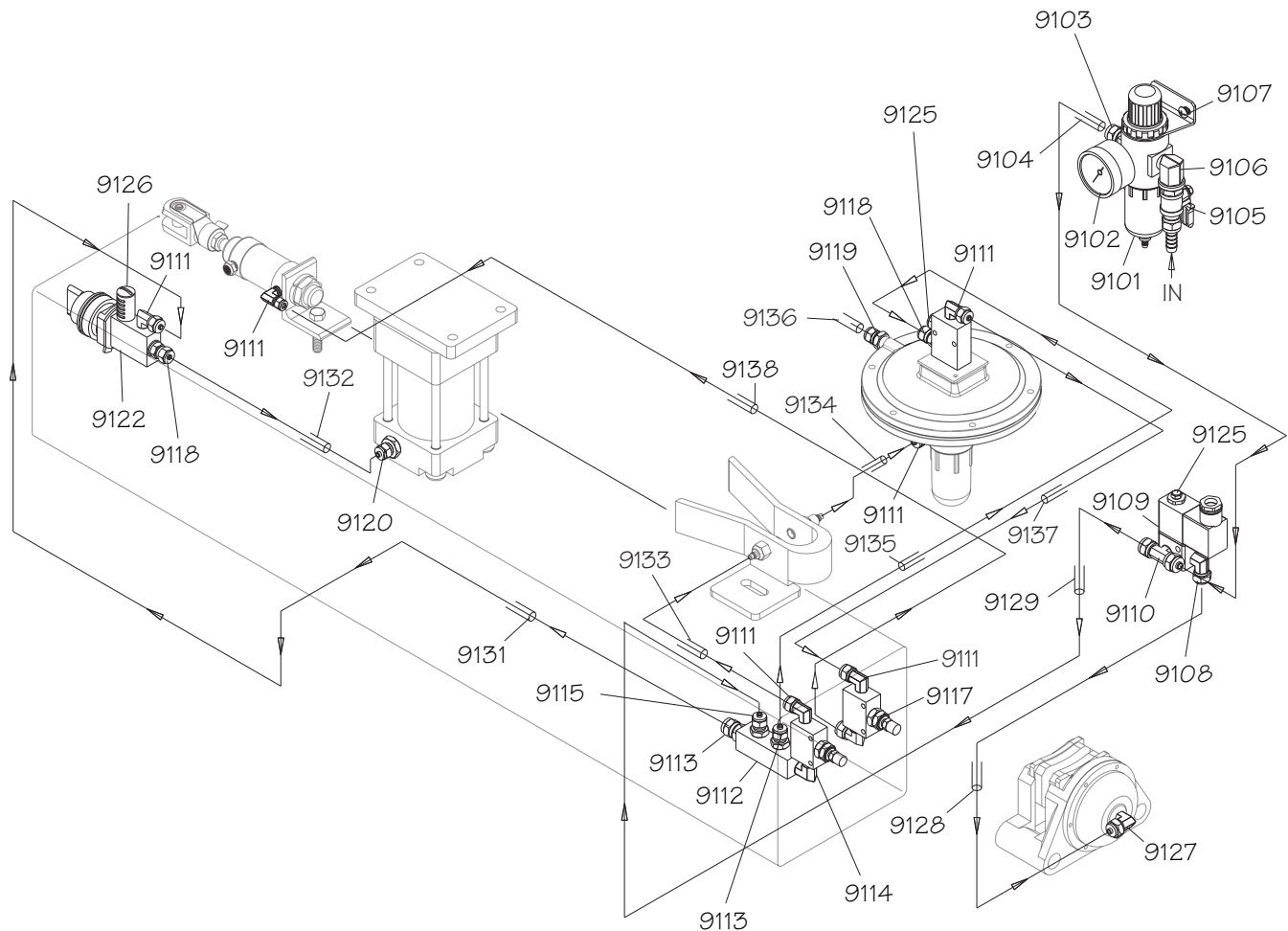




# Electrical Cabinet & Control Panel Parts List

REF	PART #	DESCRIPTION	REF	PART #	DESCRIPTION
8101	PSB10968101	ELECTRICAL CABINET	8119	PSB10968119	FLAT WASHER 1/4
8102	PSB10968102	HINGE PIN	8120	PSB10968120	LOCK WASHER 1/4
8103	PSB10968103	ELECTRICAL CABINET DOOR	8121	PSB10968121	HEX BOLT 1/4-20 X 1/2
8104	PSB10968104	ELECTRICAL COMPONENT BASE PLATE	8122	PSB10968122	STRAIN RELIEF TYPE-3 1/2-13
8105	PSB10968105	HEX NUT 1/4-20	8123	PSB10968123	STRAIN RELIEF TYPE-3 3/4-10
8106	PSB10968106	LOCK WASHER 1/4	8124	PSB10968124	STRAIN RELIEF TYPE-3 1-8
8107	PSB10968107	CONTROL PANEL	8125	PSB10968125	FUSE BUSSMAN KTK-4 4A 600V
8108	PSB10968108	PHLP HD SCR M4-.7X 8	8126	PSB10968126	AMP METER NONI NI-729
8109	PSB10968109	CURRENT SENSOR NITECH RCT-35	8128	PSB10968128	BUTTON SWITCH YK A600 220V GREEN
8110	PSB10968110	TRANSFORMER GUENN SP-TBS-20350 440V	8129	PSB10968129	BUTTON SWITCH YK A600 220V RED
8111	PSB10968111	CONTACTOR SCHN LC1D40A 220V	8130	PSB10968130	POWER INDICATOR YK A600 220V
8112	PSB10968112	OVERLOAD RELAY SCHN LR3D340 30-40A	8131	PSB10968131	E-STOP BUTTON YK A600 22V 30MM
8113	PSB10968113	FUSE HOLDER SCHN DF101	8132	PSB10968132	WIRE LOOM
8114	PSB10968114	OVERLOAD RELAY SCHN LR3D08 2.5-4V	8133	PSB10968133	CIRCUIT BOARD DP-515
8115	PSB10968115	CONTACTOR SCHN LC1D09 220V	8134	PSB10968134	440V CONVERSION KIT
8116	PSB10968116	TERMINAL BLOCK ENTRELEC M16/12	8134-1	PSB10968134-1	OL RELAY SCHN LR3D325 17-25A
8117	PSB10968117	PHLP HD SCR M4-.7X 30	8134-2	PSB10968134-2	OL RELAY SCHN LR3D071.6-2.5A
8118	PSB10968118	TERMINAL BLOCK ENTRELEC M4/6			

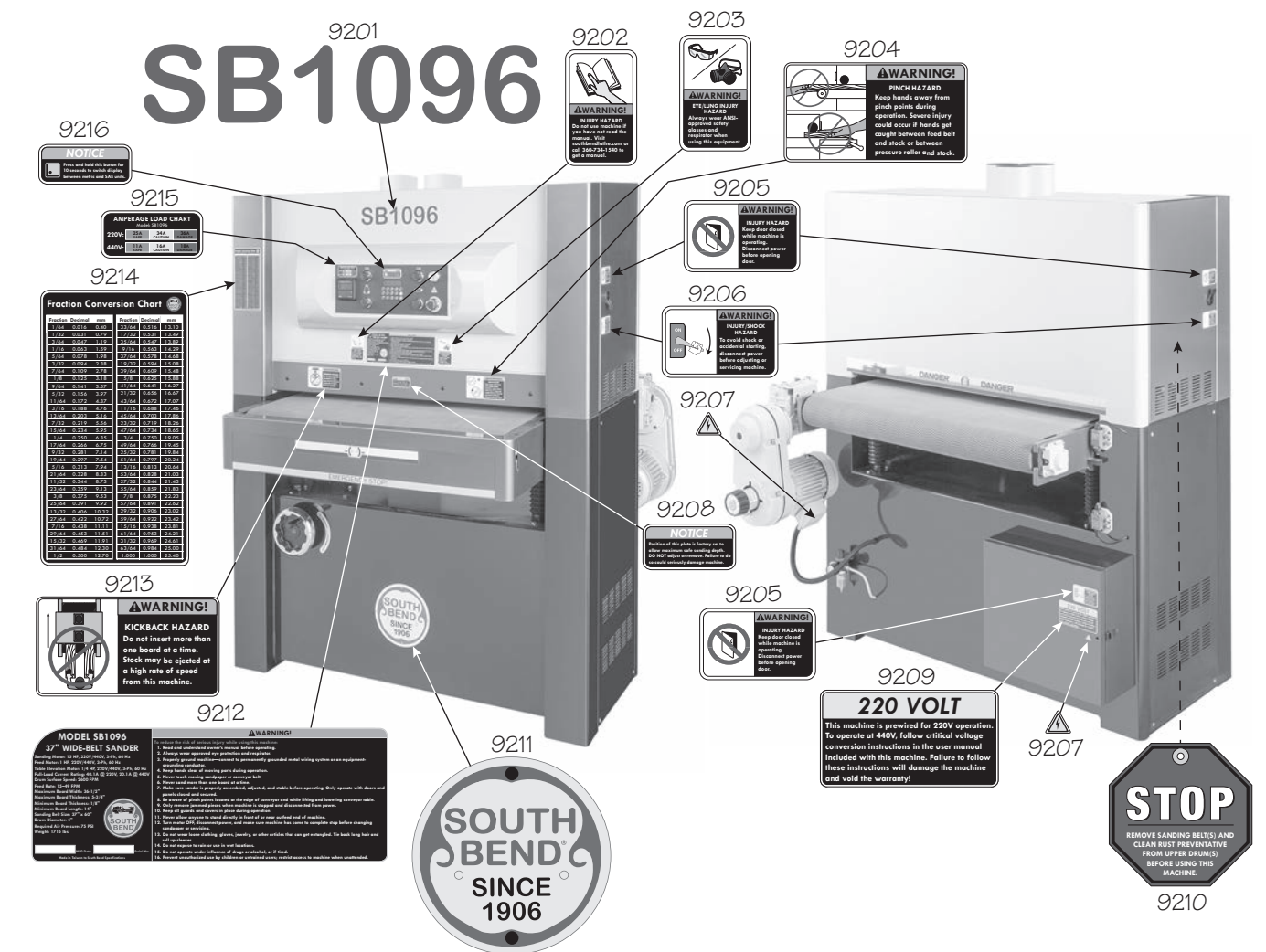
# Belt Oscillation Pneumatic System



REF	PART #	DESCRIPTION
9101	PSB10969101	REGULATOR W/FILTER
9102	PSB10969102	PRESSURE GAUGE
9103	PSB10969103	STRAIGHT FITTING 5/16N X 1/4T BRONZE
9104	PSB10969104	FLEXIBLE HOSE 8 X 900MM
9105	PSB10969105	BALL VALVE
9106	PSB10969106	ELBOW FITTING 1/4T X 1/4T 90-DEG
9107	PSB10969107	PHLP HD SCR 10-24 X 5/8
9108	PSB10969108	ELBOW FITTING 5/16N X 1/4T 90-DEG
9109	PSB10969109	SOLENOID VALVE AMISCO EVI 1/8 220V
9110	PSB10969110	T-FITTING 5/16N X 1/8T X 5/16N MALE
9111	PSB10969111	ELBOW FITTING 1/4T X 1/8T 90-DEG
9112	PSB10969112	AIR MANIFOLD 4-PORT
9113	PSB10969113	STRAIGHT FITTING 1/4N X 1/4T
9114	PSB10969114	ELBOW FITTING 1/4T X 1/8T 90-DEG BRONZE
9115	PSB10969115	STRAIGHT FITTING 5/16N X 1/4T
9117	PSB10969117	FLOW CONTROL VALVE POSU GRO-1/8
9118	PSB10969118	STRAIGHT FITTING 1/4N X 1/8T

REF	PART #	DESCRIPTION
9119	PSB10969119	STRAIGHT FITTING 1/4N X PT X 90-DEG
9120	PSB10969120	STRAIGHT FITTING 1/4N X 3/8T
9122	PSB10969122	MECHANICAL VALVE SWITCH POSU 1/8
9125	PSB10969125	BUFFER 1/8
9126	PSB10969126	BUFFER 1/8 PLASTIC
9127	PSB10969127	ELBOW FITTING 5/16N X 1/8T 90-DEG
9128	PSB10969128	FLEXIBLE HOSE 8 X 700MM
9129	PSB10969129	FLEXIBLE HOSE 8 X 1400MM
9131	PSB10969131	FLEXIBLE HOSE 6 X 1420MM
9132	PSB10969132	FLEXIBLE HOSE 6 X 620MM
9133	PSB10969133	FLEXIBLE HOSE 6 X 560MM
9134	PSB10969134	FLEXIBLE HOSE 6 X 250MM
9135	PSB10969135	FLEXIBLE HOSE 6 X 650MM
9136	PSB10969136	FLEXIBLE HOSE 6 X 300MM
9137	PSB10969137	FLEXIBLE HOSE 6 X 650MM
9138	PSB10969138	FLEXIBLE HOSE 6 X 1350MM

## Machine Labels



REF	PART #	DESCRIPTION
9201	PSB10969201	MODEL NUMBER LABEL
9202	PSB10969202	READ MANUAL LABEL
9203	PSB10969203	EYE/LUNG INJURY LABEL
9204	PSB10969204	PINCH HAZARD LABEL
9205	PSB10969205	KEEP DOOR CLOSED LABEL
9206	PSB10969206	DISCONNECT POWER LABEL
9207	PSB10969207	ELECTRICITY LABEL
9208	PSB10969208	PLATE PLACEMENT LABEL

REF	PART #	DESCRIPTION
9209	PSB10969209	220V LABEL
9210	PSB10969210	RUST PREVENTATIVE HANG TAG
9211	PSB10969211	SOUTH BEND NAMEPLATE 203MM
9212	PSB10969212	MACHINE ID LABEL
9213	PSB10969213	KICKBACK HAZARD LABEL
9214	PSB10969214	FRACTION CONVERSION LABEL
9215	PSB10969215	AMPERAGE LOAD LABEL
9216	PSB10969216	DISPLAY UNIT LABEL

## ⚠ WARNING

The safety labels provided with your machine are used to make the operator aware of the machine hazards and ways to prevent injury. The owner of this machine **MUST** maintain the original location and readability of these safety labels. If any label is removed or becomes unreadable, **REPLACE** that label before using the machine again. Contact South Bend Tools at (360) 734-1540 or [www.southbendtools.com](http://www.southbendtools.com) to order new labels.

# Warranty

This quality product is warranted by South Bend Tools to the original buyer for one year from the date of purchase. This warranty does not apply to consumable parts, or defects due to any kind of misuse, abuse, negligence, accidents, repairs, alterations or lack of maintenance. We do not reimburse for third party repairs. In no event shall we be liable for death, injuries to persons or property, or for incidental, contingent, special or consequential damages arising from the use of our products.

We do not warrant or represent that this machine complies with the provisions of any law, act, code, regulation, or standard of any domestic or foreign government, industry, or authority. In no event shall South Bend's liability under this warranty exceed the original purchase price paid for this machine. Any legal actions brought against South Bend Tools shall be tried in the State of Washington, County of Whatcom.

This is the sole written warranty for this machine. Any and all warranties that may be implied by law, including any merchantability or fitness, for any purpose, are hereby limited to the duration of this warranty. To take advantage of this warranty, contact us by mail or phone to give us the details of the problem you are having.

Thank you for your business and continued support.





[southbendtools.com](http://southbendtools.com)

