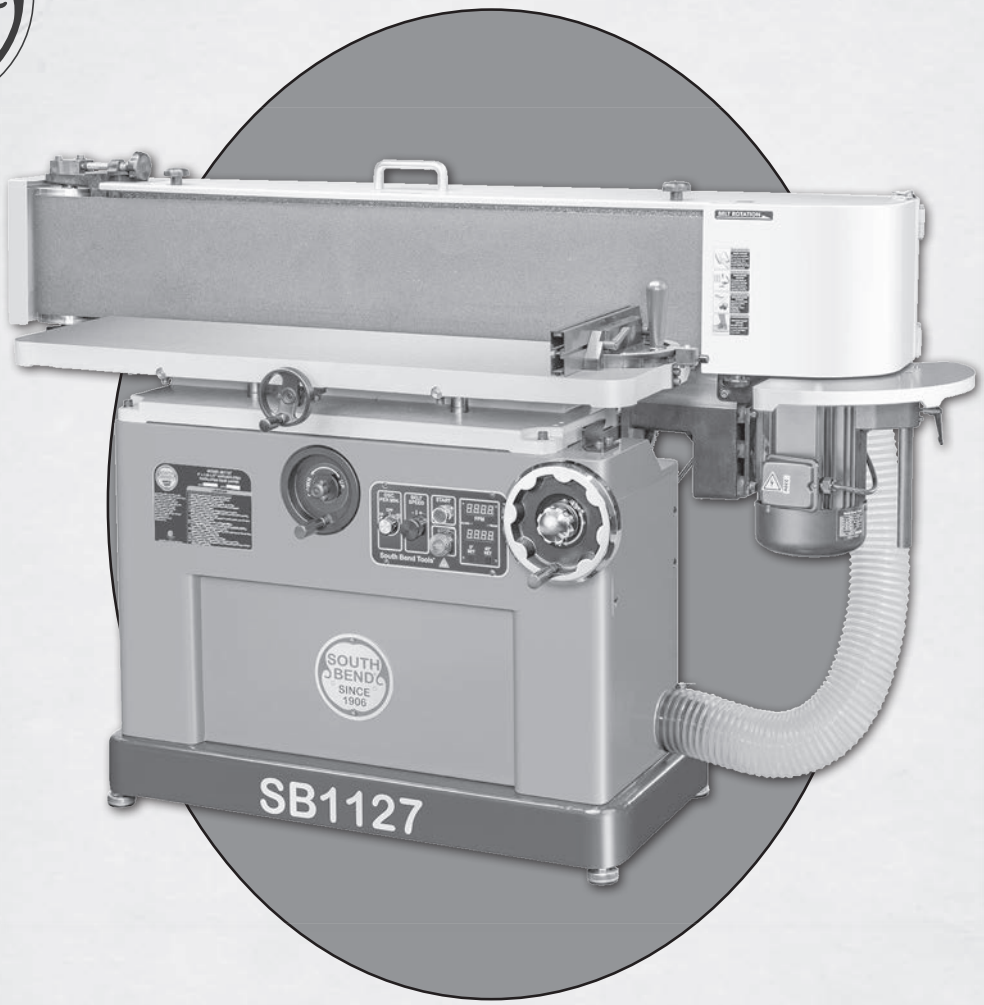
9" X 138-1/2" VARIABLE-SPEED OSCILLATING EDGE SANDER

MODEL SB1127

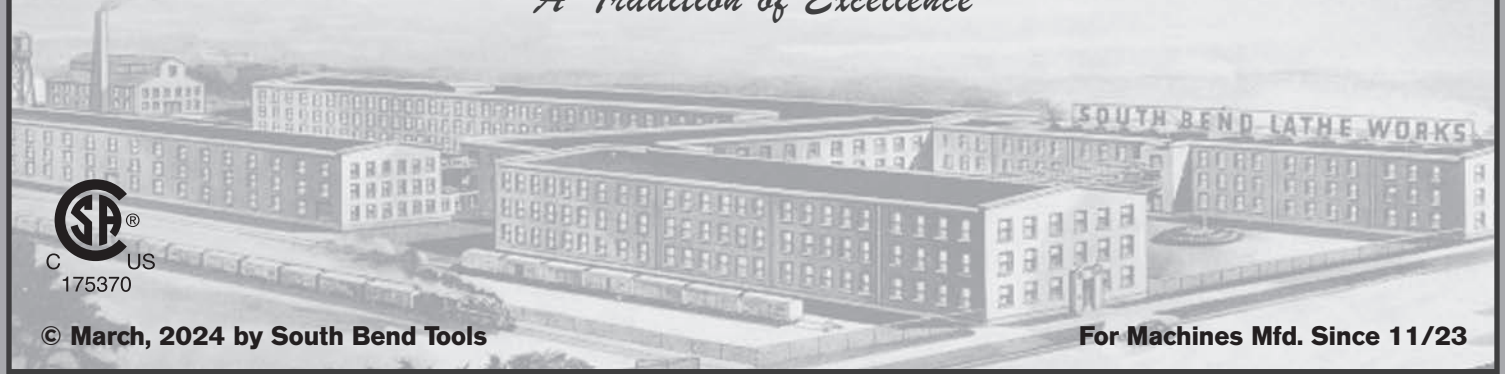


****Keep for Future Reference****

OWNER'S MANUAL

South Bend Tools®

A Tradition of Excellence



C SA® US
175370

For Machines Mfd. Since 11/23

⚠ WARNING!

This manual provides critical safety instructions on the proper setup, operation, maintenance, and service of this machine/tool. Save this document, refer to it often, and use it to instruct other operators.

Failure to read, understand and follow the instructions in this manual may result in fire or serious personal injury—including amputation, electrocution, or death.

The owner of this machine/tool is solely responsible for its safe use. This responsibility includes but is not limited to proper installation in a safe environment, personnel training and usage authorization, proper inspection and maintenance, manual availability and comprehension, application of safety devices, cutting/sanding/grinding tool integrity, and the usage of personal protective equipment.

The manufacturer will not be held liable for injury or property damage from negligence, improper training, machine modifications or misuse.

⚠ WARNING!

Some dust created by power sanding, sawing, grinding, drilling, and other construction activities contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are:

- **Lead from lead-based paints.**
- **Crystalline silica from bricks, cement and other masonry products.**
- **Arsenic and chromium from chemically-treated lumber.**

Your risk from these exposures varies, depending on how often you do this type of work. To reduce your exposure to these chemicals: Work in a well ventilated area, and work with approved safety equipment, such as a dust mask or respirator that is specially designed to filter out microscopic particles.

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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?

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Updates

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

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.

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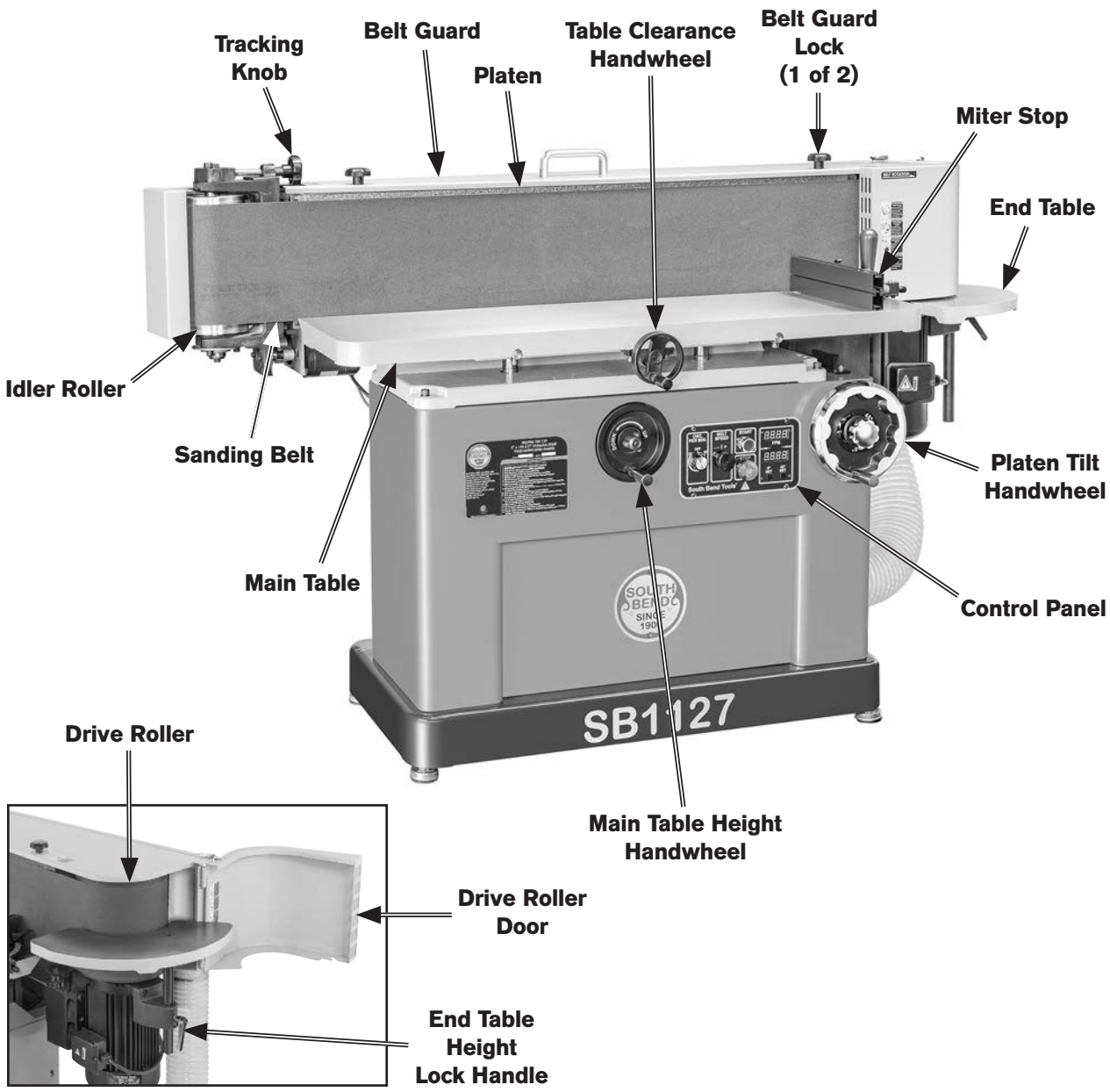
Identification



⚠WARNING

For Your Own Safety Read Instruction Manual Before Operating Sander

a) Wear eye protection.
b) Support workpiece with miter gauge, backstop, or worktable.
c) Maintain 1/16" maximum clearance between table and sanding belt.
d) Avoid kickback by sanding in accordance with the directional arrows.

Description of Controls & Components

Refer to **Figures 1–7** and the following descriptions to become familiar with the basic controls and components used to operate this machine.

Control Panel

Figure 1. Control panel components.

A. Oscillation Dial: Turns sanding belt oscillation ***ON*** and adjusts oscillations between 30–50 oscillations per minute.

B. Sanding Belt Speed Dial: Adjusts sanding belt speed between 1050–4250 feet per minute.

C. START Button: Starts motor.

D. Sanding Belt Speed Digital Readout: Displays current sanding belt speed in feet per minute (FPM).

E. ALARM Indicator: Illuminates when VFD fault occurs. ALARM indicates that machine power reset or VFD troubleshooting is required.

F. READY Indicator: Illuminates when VFD is operating correctly.

G. Platen Tilt Digital Readout: Displays current platen tilt angle.

H. 0°/45° Set Buttons: Sets platen tilt digital readout to 0˚/45˚.

I. STOP Button: Stops machine and prevents it from starting. To reset, twist button clockwise until it pops out.

Sanding Belt

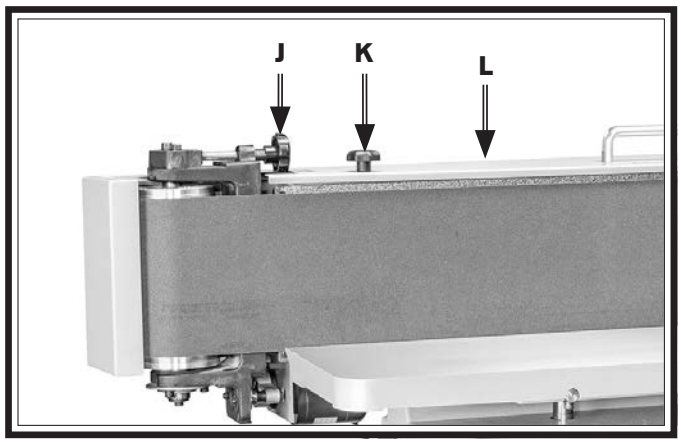


Figure 2. Sanding belt adjustment and access components.

J. Tracking Knob: Adjusts sanding belt tracking.

K. Belt Guard Lock Knob (1 of 2): Secures belt guard.

L. Belt Guard: Opens and closes to allow for sanding belt replacement and maintenance.

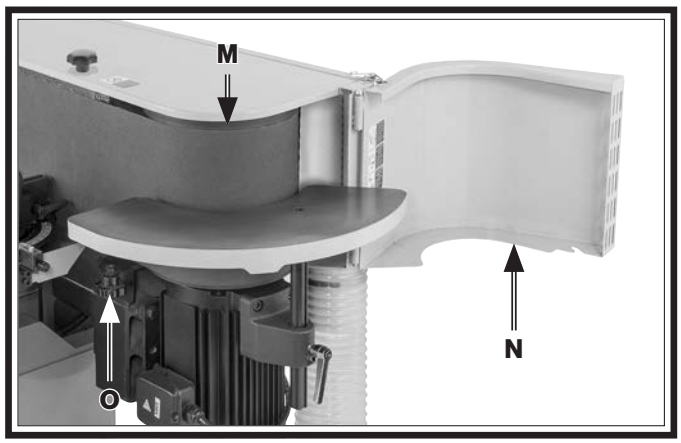


Figure 3. Drive roller and access door.

M. Drive Roller: Provides curved sanding surface for contour sanding.

N. Drive Roller Door: Opens to allow for contour sanding on end table.

O. Drive Roller Door Lock Knob: Secures drive roller door.

Platen

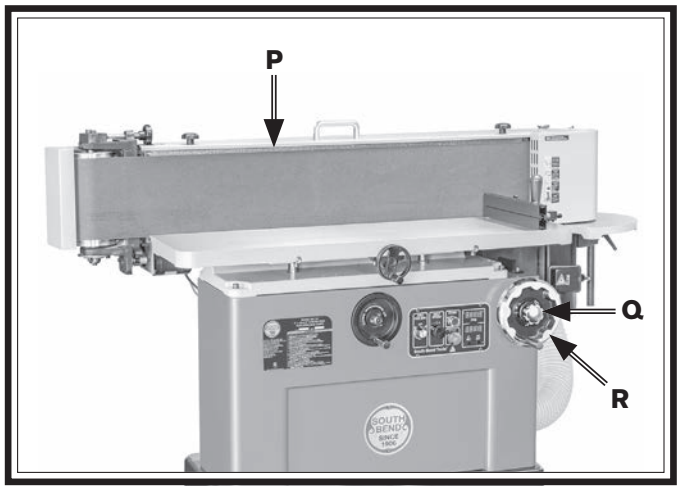


Figure 4. Platen adjustment components.

P. Platen: Provides flat surface for end and edge sanding.

Q. Platen Tilt Lock Knob: Tightens to lock platen tilt and loosens to adjust tilt.

R. Platen Tilt Handwheel: Manually adjusts platen tilt angle.

Tables

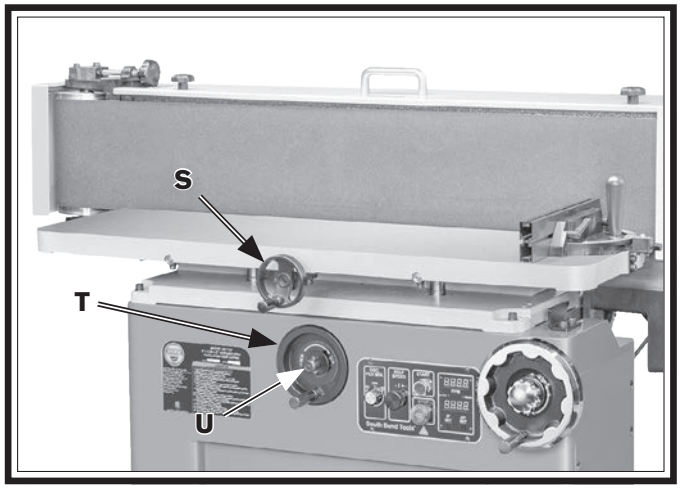


Figure 5. Main table adjustment components.

S. Table Clearance Handwheel: Adjusts distance between main table and platen.

T. Main Table Height Handwheel: Adjusts main table height.

U. Main Table Height Lock Knob: Tightens to lock table height and loosens to adjust height.

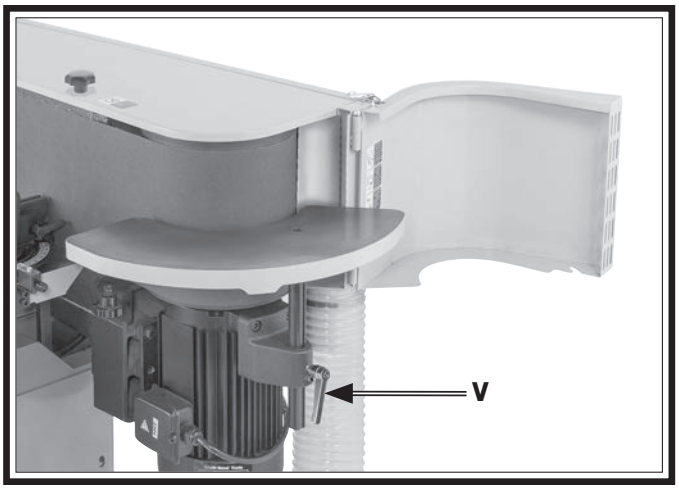


Figure 6. End table height lock handle.

V. End Table Height Lock Handle: Tightens to lock end table height and loosens to adjust end table height.

Miter Stop

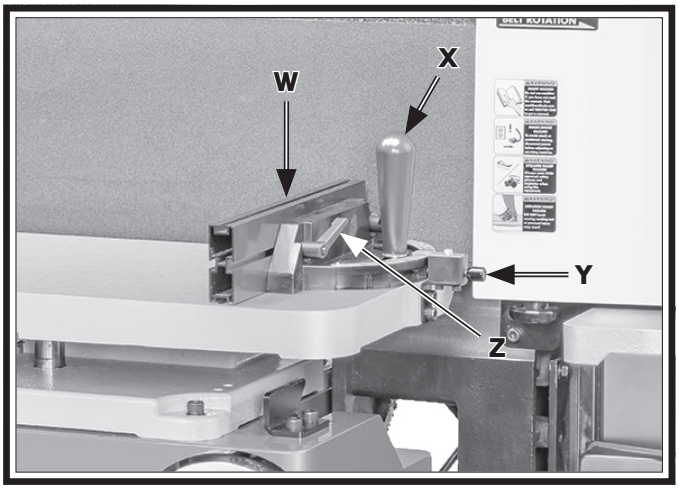


Figure 7. Miter stop components.

W. Miter Gauge w/Fence: Adjusts from 0˚–60˚ to support workpiece against sanding belt and table.

X. Miter Gauge Lock Knob: Tightens to lock miter gauge angle and loosens to adjust miter gauge angle.

Y. Angle Index Pin: Adjusts miter gauge angle when turned and stops gauge at 0˚, 30˚, and 45˚ for quick adjustments.

Z. Fence Lock Handle (1 of 2): Tightens to lock fence position and loosens to adjust fence.

SOUTH BEND SINCE 1906

Product Specifications

P.O. Box 2027, Bellingham, WA 98227 U.S.A.
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SOUTH BEND SINCE 1906

Model SB1127
9" x 138-1/2" Variable-Speed Oscillating Edge Sander

Product Dimensions

Weight	661 lbs.
Width (side-to-side) x Depth (front-to-back) x Height	76 x 40 x 46 in.
Footprint (Length x Width)	39 x 20 in.

Shipping Dimensions

Type	Wood Box
Content	Machine
Weight	811 lbs.
Length x Width x Height	81 x 31 x 51 in.
Must Ship Upright	Yes

Electrical

Power Requirement	230V, Single-Phase, 60 Hz
Full-Load Current Rating	18A
Minimum Circuit Size	20A
Connection Type	Cord & Plug
Power Cord Included	Yes
Power Cord Length	120 in.
Power Cord Gauge	12 AWG
Plug Included	Yes
Included Plug Type	6-20
Switch Type	Push Buttons
Inverter (VFD) Type	Delta VFD-ME300
Inverter (VFD) Size	3 HP

Motors

Main

Horsepower	3 HP
Phase	3-Phase
Amps	8.5A
Speed	1720 RPM
Type	TEFC Induction
Power Transfer	Direct
Bearings	Shielded & Permanently Lubricated

Oscillation

Horsepower	25W
Phase	Single-Phase
Amps	0.27A
Speed	44 RPM
Type	DC Brush
Power Transfer	Gear
Bearings	Shielded & Permanently Lubricated

Main Specifications

Operation Information

Sanding Belt Speed	1100 - 4250 FPM
Sanding Belt Oscillations	1/4 - 3/8 in.
Sanding Belt Length	138-1/2 in.
Sanding Belt Width	9 in.
Sanding Belt Tilt	0 - 45 deg.

Table Information

Table Length	46 in.
Table Width	13 in.
Table Thickness	1-3/4 in.
Table Travel	7-3/8 in.
Floor To Table Height	33-1/4 - 40-5/8 in.
End Table Length	17-1/4 in.
End Table Width	12 in.
End Table Thickness	1-3/8 in.
End Table Travel	7 in.

Platen Information

Platen Type	Graphite Coated
Platen Length	47-5/8 in.
Platen Width	10 in.

Construction

Table	Cast Iron
Frame	Aluminum
Base	Steel
Drive Roller	Rubber
Idler Roller	Aluminum
Miter Block	Aluminum
Paint Type/Finish	Enamel

Other Related Information

Number of Dust Ports	1
Dust Port Size	4 in.
Belt Release	Quick Release
Drive Roller Size	9 in.
Idler Roller Size	5 in.

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:

⚠DANGER	*Death or catastrophic harm WILL occur.*	**⚠CAUTION**	*Moderate injury or fire MAY occur.*
⚠WARNING	*Death or catastrophic harm COULD occur.*	***NOTICE***	*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 Oscillating Edge Sander Safety

⚠WARNING

Serious injury or death can occur if fingers, clothing, jewelry, or hair get entangled in moving components. Impact injuries can occur from kickback if workpiece is improperly fed into moving sanding belt. Serious pinch injuries can occur from touching in-running nip point between table and sanding surface. Long-term respiratory damage can occur from using sander without proper use of a respirator. To reduce the risk of these hazards, operator and bystanders MUST completely heed the hazards and warnings below.

Avoiding Entanglement. Becoming entangled in moving parts of this machine can cause pinching and crushing injuries. To avoid these hazards, DO NOT wear loose clothing, gloves, or jewelry, and tie back long hair. Keep all guards in place and secure.

In-Running Nip Points. The gap between moving sanding belt and fixed table/support creates a pinch point for fingers or workpieces; the larger this gap is, the greater risk of fingers or workpieces getting caught in it. Minimize this risk by adjusting table no more than 1/16" away from sanding belt.

Sanding Belt Direction. Feeding workpiece incorrectly can cause it to be thrown from machine, striking operator or bystanders, or causing your hands to slip into the moving sanding belt. To reduce these risks, only sand against direction of sanding belt travel, ensure workpiece is properly supported, and avoid introducing sharp edges into moving sanding belt on leading side of workpiece.

Workpiece Support & Hand Placement. Rotating sanding belt can remove a large amount of skin quickly, and kickback can occur with violent force if workpiece is not properly supported during operation. Always sand with workpiece firmly against table or another support device. Never touch moving sanding belt on purpose.

Workpiece Integrity. Only sand solid workpieces that can withstand power sanding forces. Make sure shape of workpiece is properly supported on table; avoid sanding workpieces without flat bottom surfaces unless some type of jig is used to maintain support and control when sanding force is applied.

Feeding Workpiece. Forcefully jamming workpiece into sanding surface could cause workpiece to be aggressively grabbed and pull your hands into sanding surface. Firmly grasp workpiece in both hands and ease it into sanding belt using light pressure.

Small Workpieces. Small workpieces are difficult to control and require close support near sanding surface. Always use a jig or other holding device when sanding small workpieces, and keep hands and fingers at least 2" away from sanding surface.

Workpiece Inspection. Nails, staples, knots, or other imperfections in workpiece can be dislodged and thrown from sander at high rate of speed into operator or bystanders, or cause damage to sanding belt or sander. Never try to sand stock that has embedded foreign objects or questionable imperfections.

Sanding Belt Condition. Worn or damaged sanding belt not only produces poor sanding results, but could fly apart, aggressively grab workpiece, and throw debris at the operator. Always inspect sanding belt before operation and replace if worn or damaged.

Sanding Dust & Dust Collection. Sanding creates large amounts of dust and flying particles that can lead to eye injury or respiratory illness. Reduce risk by wearing approved eye and respiratory protection when using sander. Never operate without adequate dust-collection system in place and running. Proper dust collection reduces dust in work area, decreasing risk of long-term respiratory damage, but it is not a substitute for using a respirator.

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

⚠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 could result in serious personal injury, damage to equipment, or poor work results.

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 1050 lbs.).
- Two lifting straps or chains (rated for at least 1050 lbs.).

For Power Connection

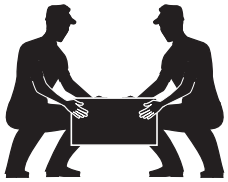
- A power source that meets the minimum circuit requirements for this machine. (Refer to the **Power Supply Requirements** section for details.)

For Assembly

- Disposable Rags
- Cleaner/Degreaser
- Safety Glasses
- Disposable Gloves
- Calipers or Measuring Tape
- Dust Hose 4"
- Two Hose Clamps 4"
- Dust Collection System

⚠WARNING

Wear safety glasses during the entire setup process!



⚠WARNING

HEAVY LIFT!

Straining or crushing injury may occur from improperly lifting machine. To reduce this risk, get help from other people or lifting equipment rated for weight of this machine.

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 Current Rating at 220V..... 18 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.

⚠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.

Circuit Requirements

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

Nominal Voltage..... 208V/220V/230V/240V
Cycle..... 60 Hz
Phase..... Single-Phase
Circuit Rating..... 20 Amps
Plug/Receptacle (included)..... NEMA 6-20

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.*

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.

This machine is equipped with a power cord that has an equipment-grounding wire and a grounding plug (similar to the figure below). The plug must only be inserted into a matching receptacle (outlet) that is properly installed and grounded in accordance with all local codes and ordinances.

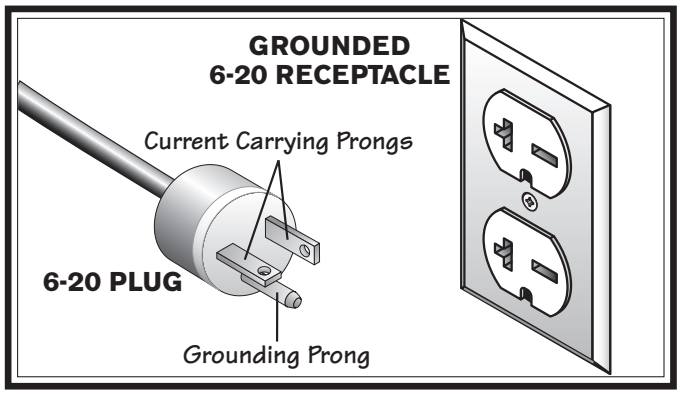
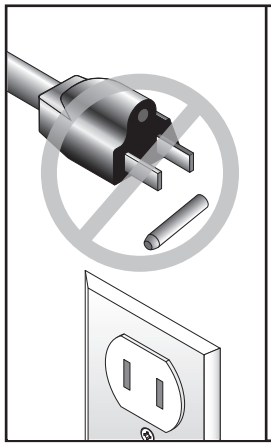


Figure 8. NEMA 6-20 plug and receptacle.



⚠CAUTION

DO NOT modify the included plug or use an adapter if it will not fit your receptacle. Instead, have a qualified electrician install the proper receptacle on a power supply circuit that is grounded and meets the requirements for this machine.

Improper connection of the equipment-grounding wire can result in a risk of electric shock. The wire with green insulation (with or without yellow stripes) is the equipment-grounding wire. If repair or replacement of the power cord or plug is necessary, do not connect the equipment-grounding wire to a live (current carrying) terminal.

Check with an electrician or qualified service personnel if you do not understand these grounding requirements, or if you are in doubt about whether the tool is properly grounded.

If you ever notice that a cord or plug is damaged or worn, disconnect it from power, and immediately replace it with a new one.

Extension Cords

We do not recommend using an extension cord with this machine. If you must use one, only use it if absolutely necessary and only on a temporary basis.

Extension cords cause voltage drop, which may damage electrical components and shorten motor life. Voltage drop increases as the extension cord size gets longer and the gauge size gets smaller (higher gauge numbers indicate smaller sizes).

Any extension cord used with this machine must contain a ground wire, match the required plug and receptacle listed in the **Circuit Requirements** for the applicable voltage, and meet the following requirements:

Minimum Gauge Size ..... 12 AWG
Maximum Length (Shorter is Better) ..... 50 ft.

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.

Inventory

Wood Crate (Figure 9)	Qty
A. Machine (Not Shown)	1
B. Sanding Belt 9" x 138½" 120-Grit	1
C. Knob Bolts M10-1.5 x 16	2

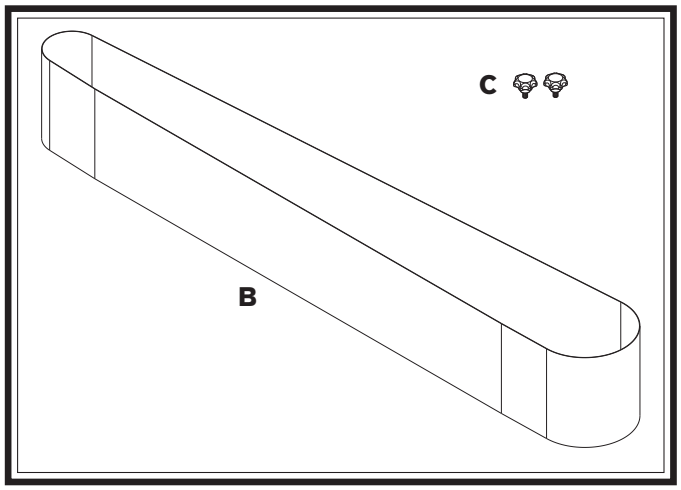
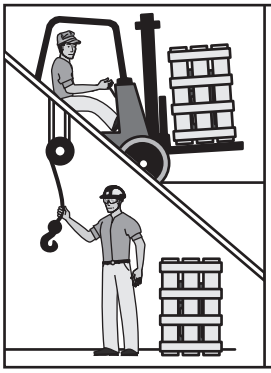


Figure 9. Loose inventory.

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 packaging materials while unpacking or they are pre-installed at the factory.

Lifting & Moving



⚠WARNING

This machine and its parts are heavy! Serious personal injury may occur if safe moving methods are not used. To reduce the risk of a lifting or dropping injury, ask others for help and use power equipment.

⚠WARNING

Using only one eye bolt or a different lifting method could unbalance and tip machine, which could result in serious injury or machine damage. To reduce risk of this injury, be sure to use BOTH eye bolts to lift machine.

Do not attempt to lift or move this machine without using the proper lifting equipment (such as a forklift or crane). Each piece of lifting equipment must be rated for at least 1050 lbs. to support the dynamic loads that may be applied while lifting.

Move the pallet to a suitable location (see **Location** on **Page 15**). Remove any loose small items from the machine, remove the shipping brackets securing the machine to the pallet, then attach lifting straps or chains to the eye bolts shown in **Figure 10**. Lift the machine just enough so the pallet can be removed, then lower the machine to place it in your desired location.

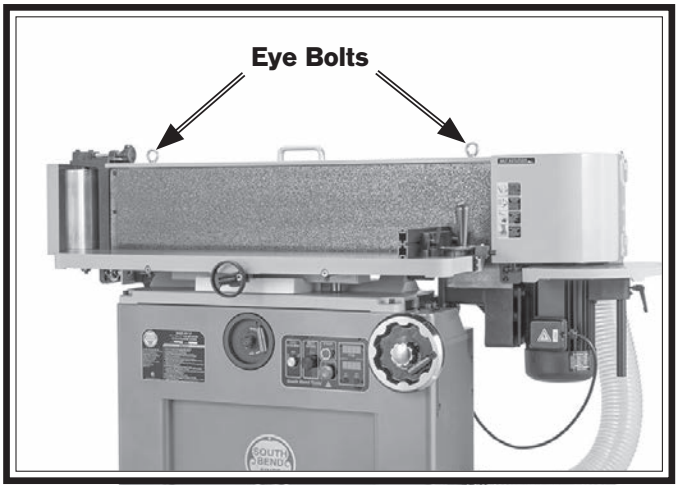


Figure 10. Lifting eye bolt locations.

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

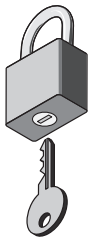
Lighting around the machine must be adequate enough to perform operations safely. Shadows, glare, or strobe effects that may distract or impede the operator must be eliminated.

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.

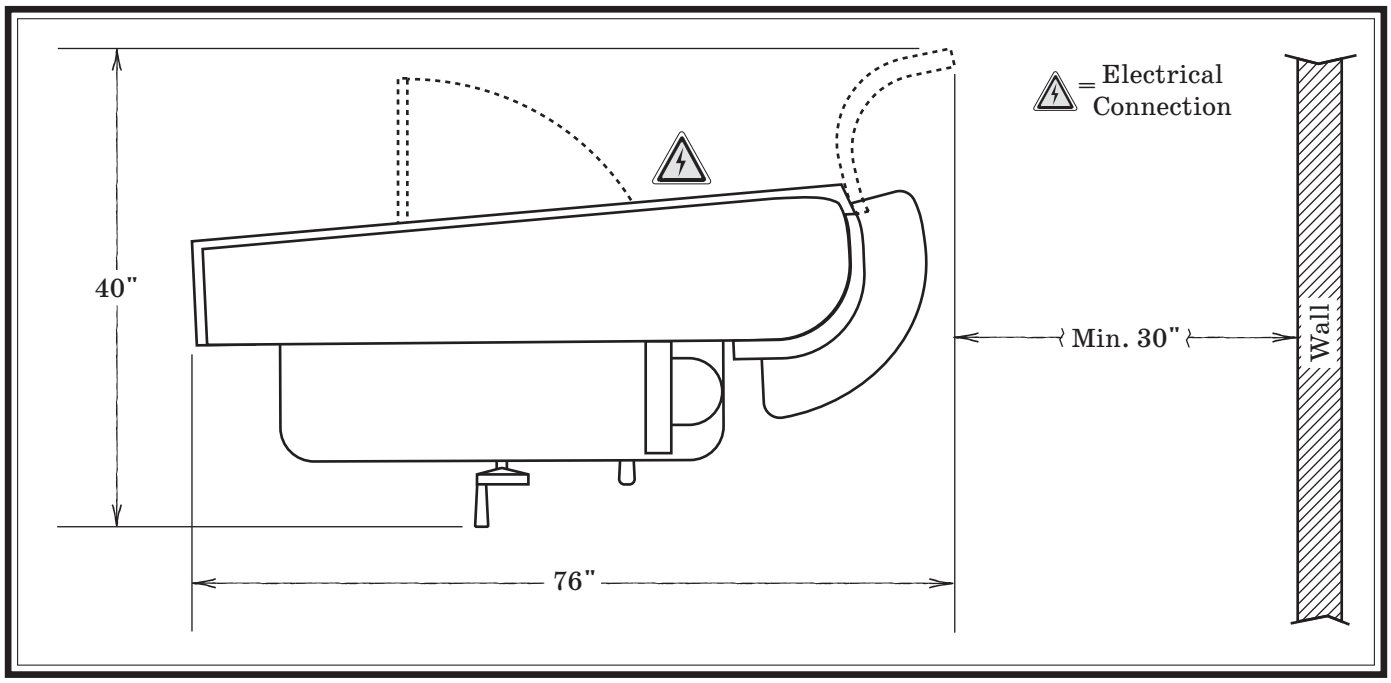


Figure 11. Minimum working clearances.

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

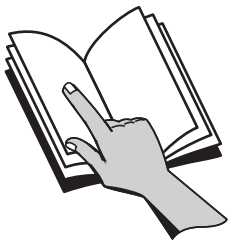
A great product for removing the waxy shipping grease from the ***non-painted*** parts of the machine during clean up.

Order online at www.grizzly.com OR Call 1-800-523-4777

Figure 12. T23692 Orange Power Degreaser.

Assembly

The machine must be fully assembled before it can be operated. Before beginning the assembly process, see **Required for Setup** on **Page 11** and gather all listed items. To ensure the assembly process goes smoothly, first clean any parts that are covered or coated in heavy-duty rust preventative (if applicable).



⚠WARNING

Incorrect use of this machine can result in death or serious injury. For your own safety, read and understand this entire document before using.

To assemble machine:

1. Adjust (4) adjustable feet in or out of machine base (see **Figure 13**) as needed to level machine.

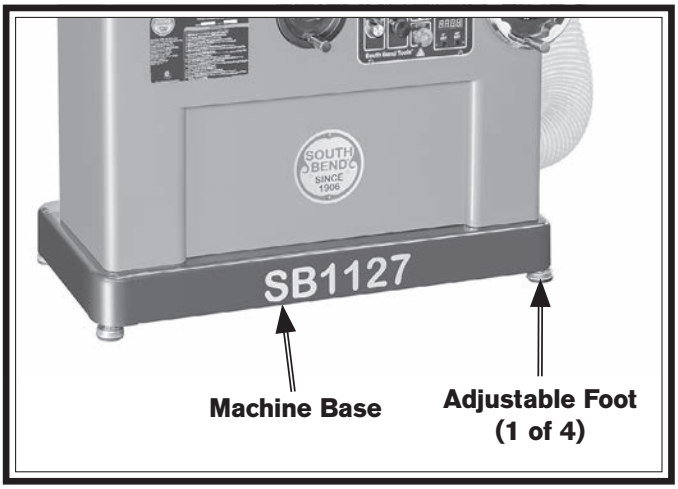


Figure 13. Location of adjustable feet.

2. Remove (2) eye bolts used for lifting (see **Figure 14**).

   Note: *Save eye bolts in case you need to move machine later.*

3. Loosen main table height lock knob (see **Figure 14**).

4. Turn main table height handwheel clockwise a few turns to raise table enough so you can remove foam packing (see **Figure 14**).

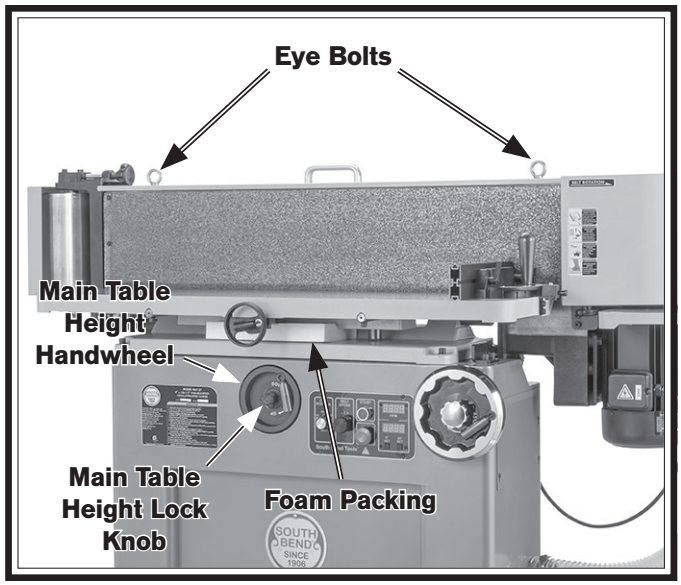


Figure 14. Packing and transport removal components.

5. Open belt guard and move belt tension lever up and toward idler roller (see **Figure 15**).

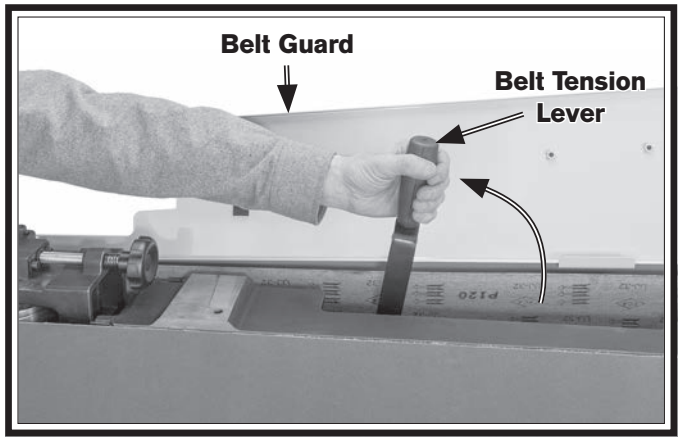


Figure 15. Belt guard open and belt tension lever moved up toward idler roller.

6. Install and center sanding belt around rollers, being sure arrows on belt match arrows of belt rotation on machine (see **Figure 16**).

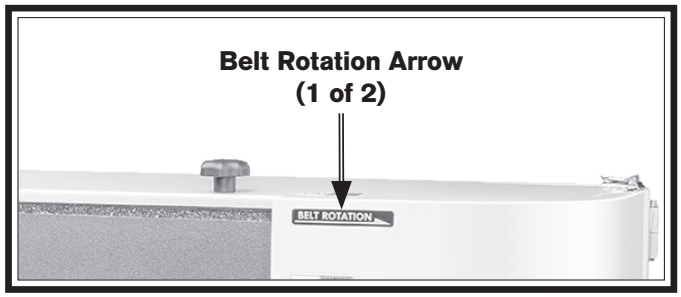


Figure 16. Belt rotation arrow.

7. Move belt tension lever down, toward drive roller, to tension sanding belt.

8. Close belt guard and secure with (2) M10-1.5 x 16 knob bolts, as shown in **Figure 17**.

9. Measure clearance between table and sanding belt.

— If clearance is *equal to or less than* 1/16" **(**see **Figure 17),** and table is not contacting sanding belt, no further adjustment is necessary. Proceed to **Dust Collection**.

— If clearance is *more than* 1/16", or is touching sanding belt, proceed to **Step 10**.

10. Turn table clearance handwheel **(**see **Figure 17)** until table is within 1/16" of sanding belt, but not touching sanding belt.

— Turn handwheel clockwise to increase clearance.

— Turn handwheel counterclockwise to decrease clearance.

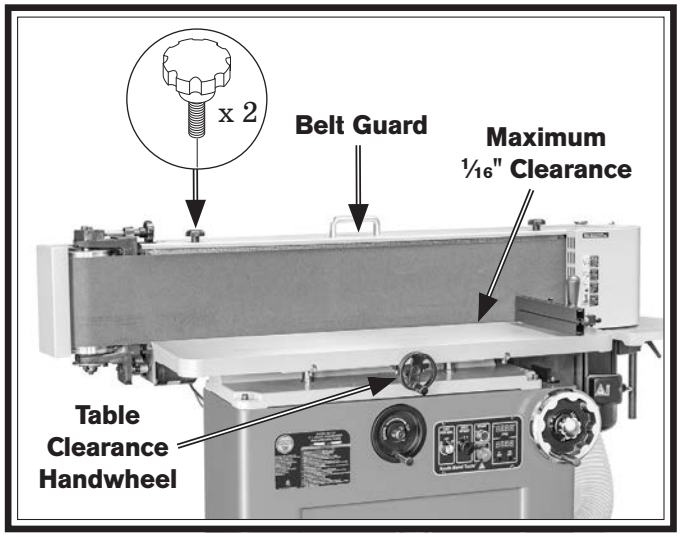


Figure 17. Belt guard lock knobs installed and location of table clearance handwheel.

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 respirator and capturing the dust with a dust-collection system.

Recommended CFM at Dust Port: 400 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 machine to dust collector:

1. Fit 4" dust hose connected to a dust collector over rear dust port **(**see **Figure 18),** and secure in place with hose clamp.

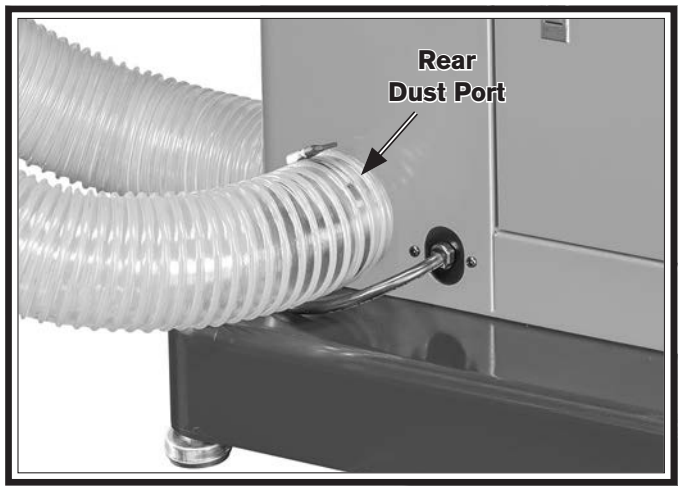


Figure 18. Dust hose attached to rear dust port.

2. Tug hose to make sure it does not come off.

Note: *A tight fit is necessary and ensures proper performance during operation.*

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 39*** *for solutions to common problems that may occur. If you need additional help, contact our Tech Support at (360) 734-1540.*

The test run consists of verifying the following:

- Sanding belt tracks properly and will not come off rollers during initial startup.
- Motors power up and run correctly.
- STOP button 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 away all tools and objects used during preparation and assembly.

2. Perform **Steps 2–3** as described in **Pre-Tracking Sanding Belt** on **Page 24** to pre-track sanding belt.

3. Press STOP button in (see **Figure 19**).

4. Turn oscillation and sanding belt speed dials all the way counterclockwise (see **Figure 19**).

Figure 19. Control panel.

5. Loosen drive roller door lock knob (see **Figure 20**).

Figure 20. Location of drive roller door lock knob.

6. Open drive roller door and use latch shown in **Figure 21** to secure it open.

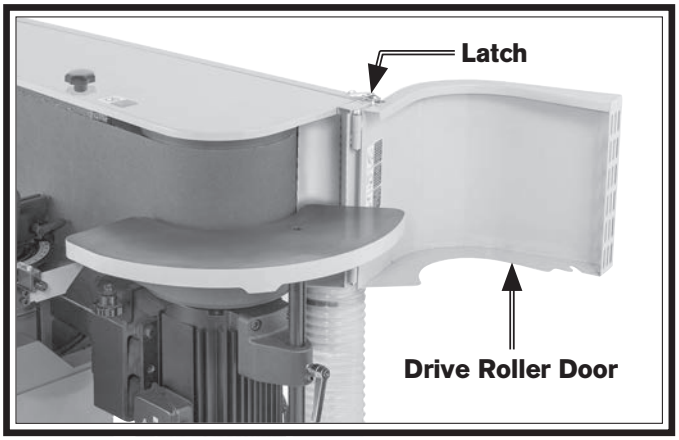


Figure 21. Drive roller door secured open.

7. Connect machine to power source. Digital readouts will illuminate.

8. Twist STOP button clockwise until it springs out (see **Figure 22**). This resets switch so machine can start.

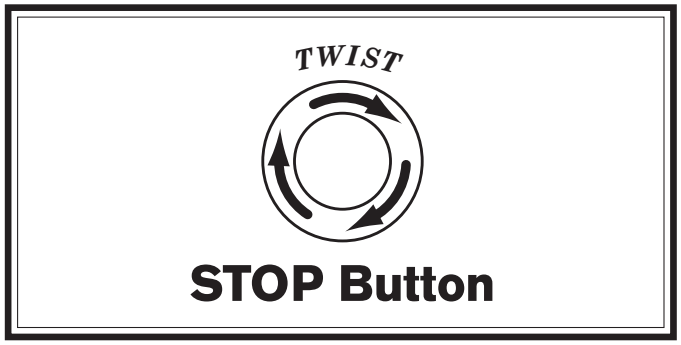


Figure 22. Resetting switch.

9. Use START and STOP buttons (see **Figure 23**) to start and immediately stop machine, while watching how sanding belt tracks on rollers. "Tracking" refers to sanding belt positioning on rollers when sanding belt rotates. When tracking properly, sanding belt remains centered on rollers as they rotate.

— If sanding belt tracks centered on rollers, proceed to **Step 10**.

— If sanding belt *does not* track centered on rollers, you must adjust sanding belt tracking before proceeding to next step so sanding belt is not damaged. Refer to **Checking/Adjusting Sanding Belt Tracking** on **Page 25** and perform **Steps 4–6** before continuing.

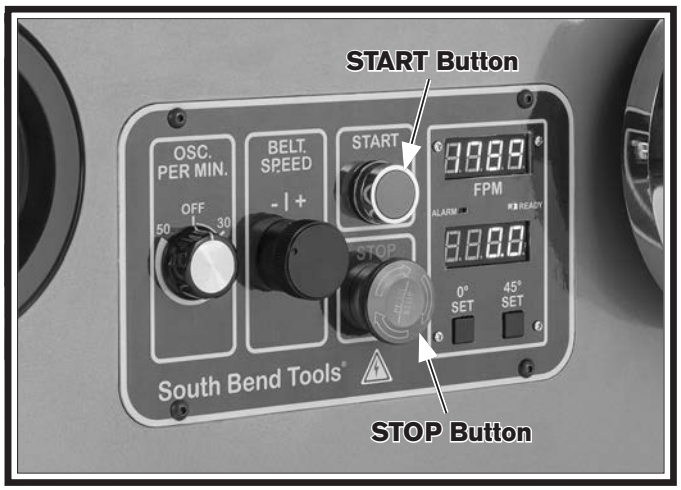


Figure 23. Control panel.

10. Start machine and allow it to run while ensuring sanding belt tracks properly.

Sanding belt motor should run smoothly and without unusual problems or noises, and sanding belt MUST rotate in same direction as arrow of belt rotation on machine.

— If motor runs smoothly and sanding belt rotates in correct direction, proceed to **Step 11**.

— If motor *does not* run smoothly, or sanding belt *does not* rotate in correct direction, turn machine ***OFF*** and disconnect power. Contact Technical Service before proceeding.

11. Verify speed controls by slowly turning sanding belt speed dial clockwise. Rotate dial back and forth to test variable-speed function.

12. Slowly turn oscillation dial clockwise so dial is between 30–50 oscillations per minutes (OPM).

Oscillation motor should run smoothly and without unusual problems or noises.

— If motor runs smoothly, proceed to **Step 13**.

— If motor *does not* run smoothly, turn machine ***OFF*** and disconnect power. Contact Technical Service before proceeding.

13. Press STOP button to turn machine ***OFF***.

14. WITHOUT resetting STOP button, try to start machine by pressing START button. Machine should not start.

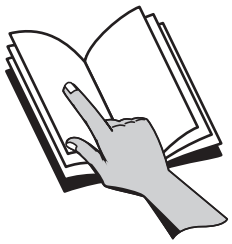
— If machine *does not* start, safety feature of STOP button is working correctly. Congratulations! Test run is complete.

— If machine *does* start, immediately turn it ***OFF*** and disconnect power. Safety feature of STOP button is NOT working properly and must be replaced before further using machine. Contact Technical Support.

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.*

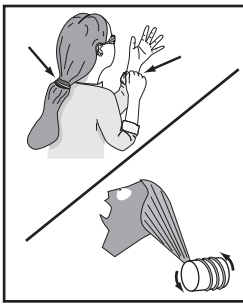


⚠WARNING

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.



⚠WARNING

Keep hair, clothing, and jewelry away from moving parts at all times. Entanglement can result in death, amputation, or severe crushing injuries!

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 Tools will not be held liable for accidents caused by lack of training.

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

1. Examines workpiece to make sure it is suitable for sanding. No extreme bows, knots, or cracks should exist.
2. Prepares and trims workpiece as necessary.
3. Installs sanding belt with appropriate grit for operation.
4. Adjusts platen tilt and table height as desired, then adjusts table clearance to allow maximum of 1/16" clearance between table and sanding belt.
5. Ties back loose hair and clothing, and puts on safety glasses and respirator. Takes all other required safety precautions.
6. Starts sander and dust collecting system.
7. With both hands, holds workpiece firmly and flatly against table (and miter stop, if using main table), and gradually eases workpiece into sanding belt.
8. Stops machine.

Stock Inspection & Requirements

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

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.

Sanding Tips

- Avoid sanding a workpiece more than is necessary, since doing so will unnecessarily decrease sanding belt life and cost you more money over time.

- Extend the life of sanding belts by regularly using an abrasive surface cleaner.

- As a rule-of-thumb, sand with progressively higher grit numbers in increments of 50 or less.

- Replace sanding belt with a higher grit to achieve a finer finish (refer to **Installing/ Changing Sanding Belts** on **Page 23**).

- Hold the workpiece securely with both hands. Use the tables/miter stop/back stop whenever possible to support workpieces. Do not force the workpiece against the sanding belt.

- When sanding workpieces with a bow or crown, place the high point up on the table to prevent the workpiece from rocking, then take very light passes.

- Use the full width of the sanding belt by adjusting the table height or workpiece position so sanding is not always done in just one area.

- Make sure belt guard is closed and secured during operation.

- Sanding belts clog and wear. Change sanding belt whenever you notice a difference in sanding quality/performance.

⚠WARNING

Moving sanding belt can cause serious personal injury if it comes in contact with fingers, hands, or other body parts. Always support workpiece against table or miter stop when sanding. Use extreme care to provide safe distance between sanding belt and any body part.

Choosing Sanding Belts

The Model SB1127 uses a 9" x 138½" sanding belt.

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.

Grit	Class	Usage
36	Extra Coarse	Rough sawn boards, thickness sanding, and glue removal.
60	Coarse	Thickness sanding and glue removal.
80–100	Medium	Removing marks and initial finish sanding.
120–180	Fine	Finish sanding.

The general rule of thumb is to sand a workpiece with progressively higher grit numbers—in increments of 50 or less. Avoid skipping grits; the larger the grit increase at one time, the harder it will be to remove the scratches from the previous grit.

Note: *A sanding belt with finer than 180-grit will easily load up or burn workpieces.*

Installing/Changing Sanding Belts

Change the sanding belt when your project requires a different grit size for quick material removal or finer finishes. A sanding belt should be replaced whenever there is a noticeable change in sanding quality/performance.

Required Sanding Belt Size ..... 9" x 138½"

To install/change sanding belt:

1. DISCONNECT MACHINE FROM POWER!

2. Loosen drive roller door lock knob (see **Figure 24)** and open drive roller door.

   Note: *Do not latch door open, it will prevent Step 3.*

3. Remove (2) belt guard lock knobs (see **Figure 24)** and open belt guard.

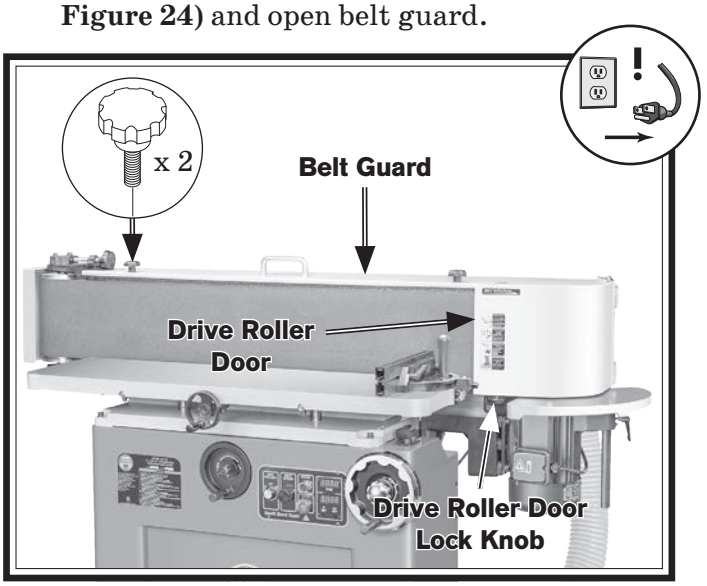


Figure 24. Location of belt guard and drive roller door components.

4. Move belt tension lever up and toward idler roller (see **Figure 25**).

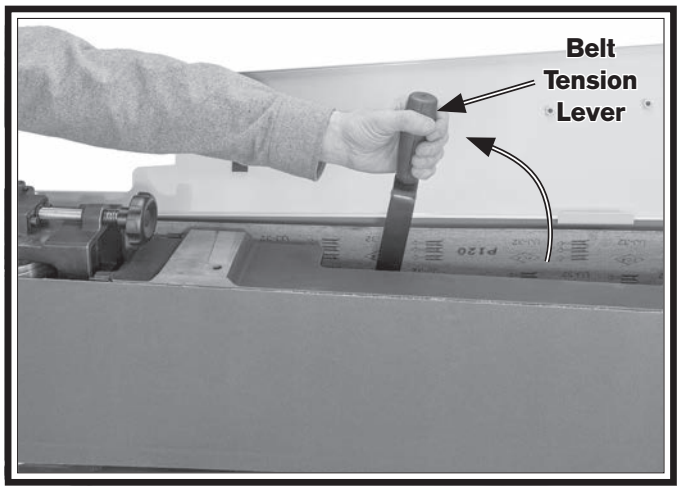


Figure 25. Belt tension lever moved up toward idler roller.

5. Remove old sanding belt and replace with new one, being sure arrows on belt match arrow of belt rotation on machine (see **Figure 26**).

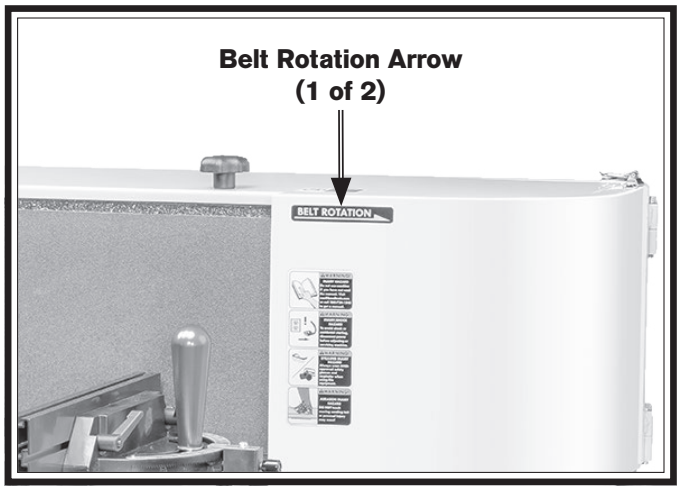


Figure 26. Belt rotation arrow.

6. Move belt tension lever down, toward drive roller, to tension sanding belt.

7. Close belt guard and secure with belt guard lock knobs.

8. Sanding belt MUST be pre-tracked before connecting machine to power. Proceed to **Pre-Tracking Sanding Belt**.

Pre-Tracking Sanding Belt

You must perform the following procedure after installing a sanding belt to ensure that the sanding belt does not come off or get jammed against the sanding belt frame.

Items Needed	Qty
Protective Gloves	1 Pair

To pre-track sanding belt:

1. Install desired sanding belt (see **Installing/ Changing Sanding Belts** on **Page 23**).

⚠CAUTION

Fingers or other body parts can be quickly injured if they touch moving sanding surfaces. To reduce this risk, wear gloves in next step.

2. Standing in front of sander, push sanding belt multiple times along platen, so that it moves in direction of operation (counterclockwise on rollers, as viewed from above), then watch how sanding belt tracks on rollers (see **Figure 27**).

3. Turn tracking adjustment knob clockwise to adjust tracking upward or counterclockwise to adjust tracking downward, while continuing to rotate sanding belt by hand until sanding belt is centered on rollers (see **Figure 27**).

   Note: *Adjust tracking knob in about 1-turn increments.*

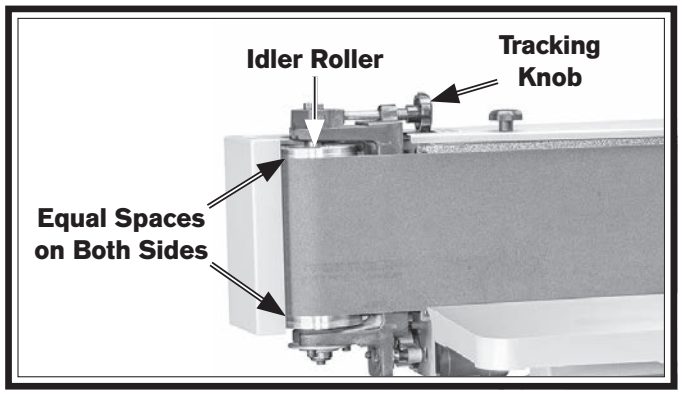


Figure 27. Location of tracking knob and example of sanding belt centered on idler roller.

4. Once sanding belt tracks centered on rollers, proceed to **Checking/Adjusting Sanding Belt Tracking**.

Checking/Adjusting Sanding Belt Tracking

The purpose of sanding belt tracking is to make sure the sanding belt stays centered on the rollers and platen during sanding operations. The sanding belt tracking needs to be checked any time you change or replace the sanding belt.

If the sanding belt tracking is not adjusted properly, the sanding belt can be damaged and present a serious safety hazard if it moves off center of the rollers and throws material when it contacts the belt guard and other components.

⚠WARNING

It is necessary to connect machine to power to visually track sanding belt tracking. DO NOT attempt to touch or adjust sanding belt while machine is connected to power. Failure to unplug machine before making adjustments could result in serious personal injury.

To check/adjust sanding belt tracking:

1. Install desired sanding belt (see **Installing/Changing Sanding Belts** on **Page 23**).

2. Pre-track sanding belt (see **Pre-Tracking Sanding Belt** on **Page 24**).

3. Connect machine to power.

4. Press START button, then press STOP button immediately after. Sander should run just long enough to observe sanding belt tracking across rollers and platen.

   Note: *When sanding belt oscillation is turned ON, sanding belt will oscillate up and down on rollers, but will ultimately stay centered on rollers so it does not wander off of rollers. Do not confuse sanding belt oscillation with poor sanding belt tracking.*

   — If sanding belt tracks centered on rollers, no adjustment is necessary. Proceed to **Step 7**.

   — If sanding belt *does not* track centered on rollers, proceed to **Step 5**.

5. Turn tracking adjustment knob clockwise to adjust tracking upward or counterclockwise to adjust tracking downward (see **Figure 28**).

   Note: *Adjust tracking knob in about 1-turn increments.*

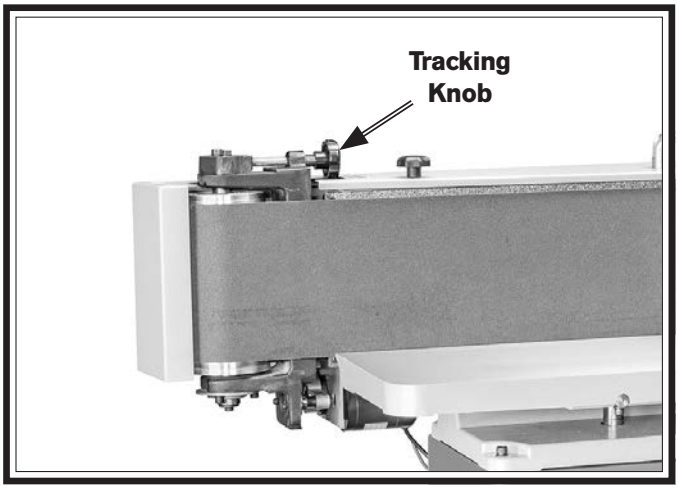


Figure 28. Location of tracking knob.

6. Repeat **Steps 4–5** until sanding belt tracks in center of rollers.

7. Secure drive roller door before proceeding with operations (see **Figures 29–30**).

— For sanding on main table, close door and tighten drive roller door lock knob to secure.

— For sanding on end table, use latch to secure door open.

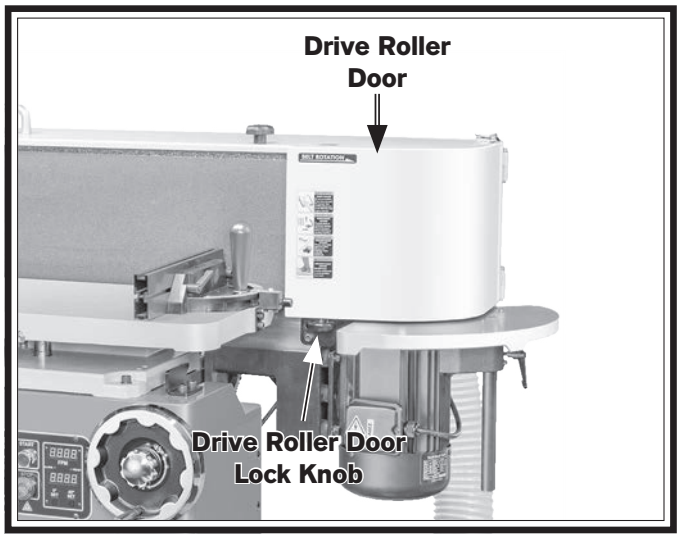


Figure 29. Drive roller door secured closed.

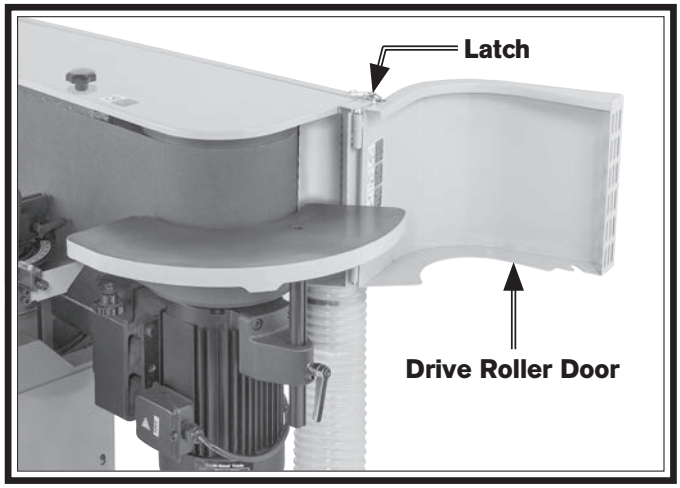


Figure 30. Drive roller door secured open.

Adjusting Platen Tilt

The platen adjusts from 0°–45° for beveled workpieces. If you find that the platen tilt digital readout is not accurate, press the 0° set button when the platen is tilted to 0° or the 45° button when the platen is tilted to 45° to reset it.

Note: *Stop bolts stop the platen at 0° and 45°. Refer to* ***Adjusting Platen Tilt Stops*** *on* ***Page 36*** *if these stop bolts require adjustment.*

When adjusting the platen tilt to an angle other than 0°, be advised that the existing miter fence cannot be adjusted to within 1/16" of the entire platen. Consider using an auxiliary fence that conforms to the angle of the platen to reduce the pinch risk this presents.

Adjusting Platen Tilt

1. Connect machine to power, then press STOP button to disable sanding belt rotation and prevent accidental machine startup.

2. Loosen platen tilt lock knob (see **Figure 31**).

3. Use platen tilt handwheel to tilt platen until platen tilt digital readout displays desired angle (see **Figure 31**).

— Turn handwheel counterclockwise to increase angle.

— Turn handwheel clockwise to decrease angle.

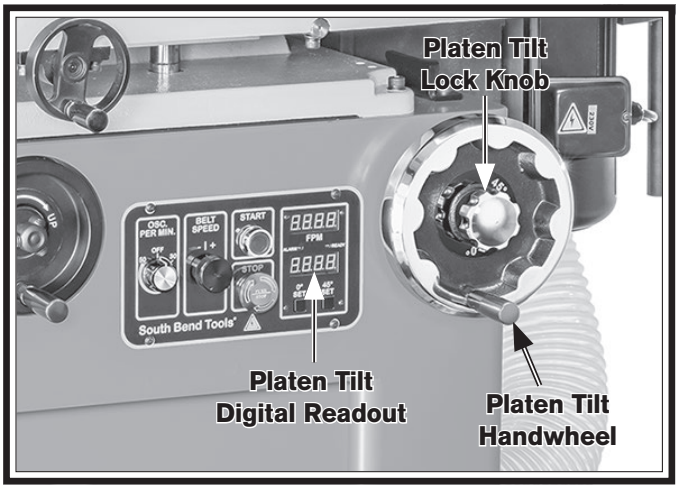


Figure 31. Platen tilt components.

4. Tighten platen tilt lock knob to secure.

5. Adjust main table clearance to within 1/16" of sanding belt (see **Adjusting Main Table Clearance** on **Page 29**).

Making an Auxiliary Fence

Any support fixture close to the platen that is more than 1/16" from the sanding belt results in an in-running nip point that could pull fingers or workpieces into the open space.

A shop-made auxiliary fence will allow you to use the installed miter stop for operations where the platen has been tilted, instead of removing it and installing some other jig or fixture. This fence should be cut to the same angle as the platen tilt in order to minimize the risk of pinch points for fingers or workpieces.

Items Needed **Qty**
Hardwood 1/4" x 2 3/4" x 16" 1
Marker.....1
Drill 1
Drill Bits for Countersinking..... As Needed

To make an auxiliary fence:

1. Adjust platen tilt to desired bevel angle (see **Adjusting Platen Tilt** on **Page 26**).

2. Cut piece of hardwood stock at least 1/4" thick to the same height as existing miter fence, and at least 16" long (see **Figure 32**).

   Note: *We recommend cutting hardwood board oversize, then jointing and planing it to correct size to make sure board is square and flat.*

3. Mark and cut desired bevel angle (same as platen tilt angle) on one edge of board (see **Figure 32**).

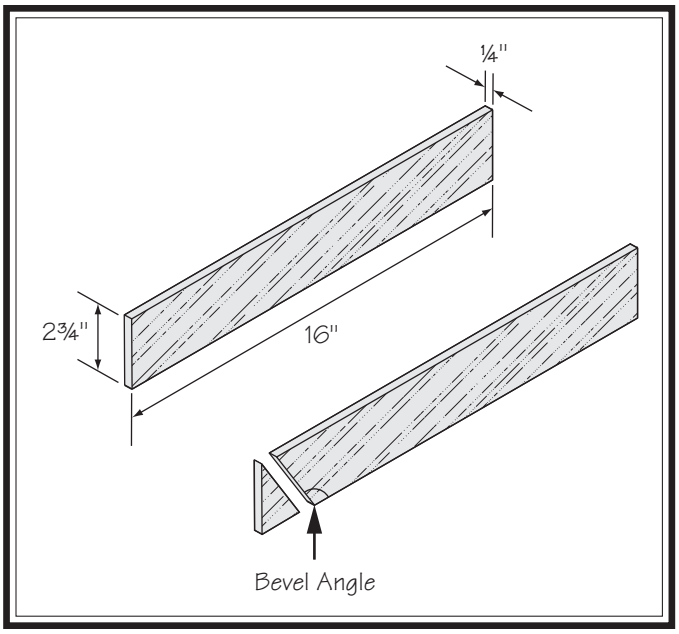


Figure 32. Auxiliary fence dimensions.

4. DISCONNECT MACHINE FROM POWER!

5. Adjust main table height as desired for operation, then adjust main table clearance to 1/16" or less (see **Adjusting Main Table** on **Page 29**).

6. Remove (2) miter fence lock handles (see **Figure 33**), then remove miter fence from miter stop.

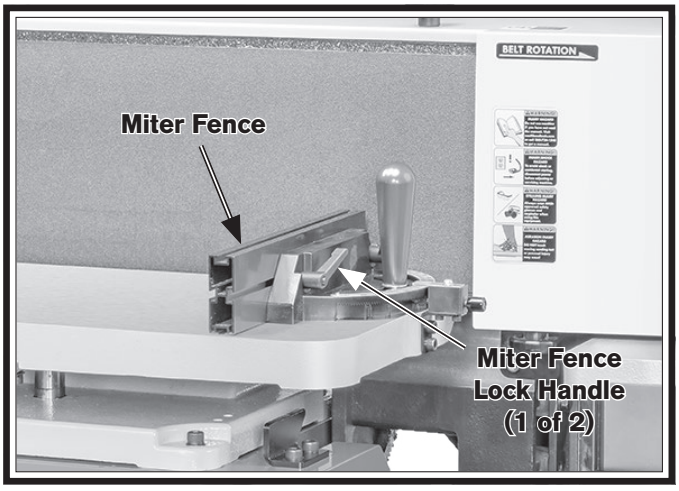


Figure 33. Location of miter fence and miter fence lock handles.

7. Remove (2) hex bolts from miter fence.

8. Place board in miter fence position against table so angled edge is within 1/16" of sanding belt (see **Figure 34**).

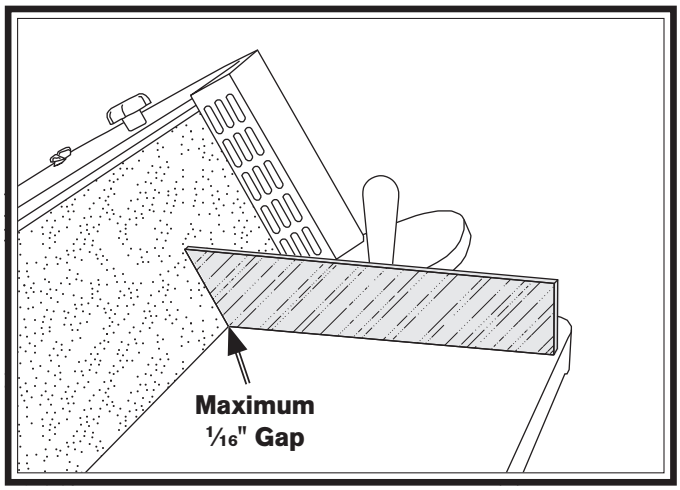


Figure 34. Board in miter fence position.

9. Use miter fence lock handle holes to mark (2) mounting holes in board.

10. Drill countersunk mounting holes in auxiliary fence so miter fence hex bolts and lock handles can be used to secure auxiliary fence to miter stop (see **Figure 35**).

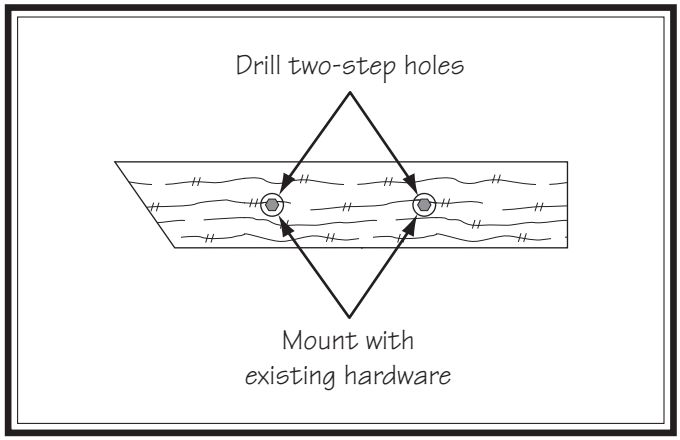


Figure 35. Example of auxiliary fence mounting holes.

Note: *Drilling these holes is a two-step process. Drill first holes all the way through board with a diameter a little larger than shaft of hex bolt. Drill second holes 3/16" through board with a diameter a little larger than hex bolt head. Second holes must be deep enough that bolt heads will be well below surface of board.*

11. Secure auxiliary fence to miter stop with (2) miter fence hex bolts and lock handles (see **Figure 36**).

Figure 36. Example of auxiliary fence installed.

Adjusting Main Table

The main table height and clearance are adjustable to accommodate a wide range of sanding operations and to prolong sanding belt life.

Adjusting Main Table Height

Adjust the table up and down when operations allow it so you can use the full width of the sanding belt to prevent spot wear.

To adjust main table height:

1. DISCONNECT MACHINE FROM POWER!

2. Loosen main table height lock knob (see **Figure 37**).

3. Adjust main table height handwheel (see **Figure 37**) as desired.

   — Turn handwheel clockwise to move table up.

   — Turn handwheel counterclockwise to move table down.

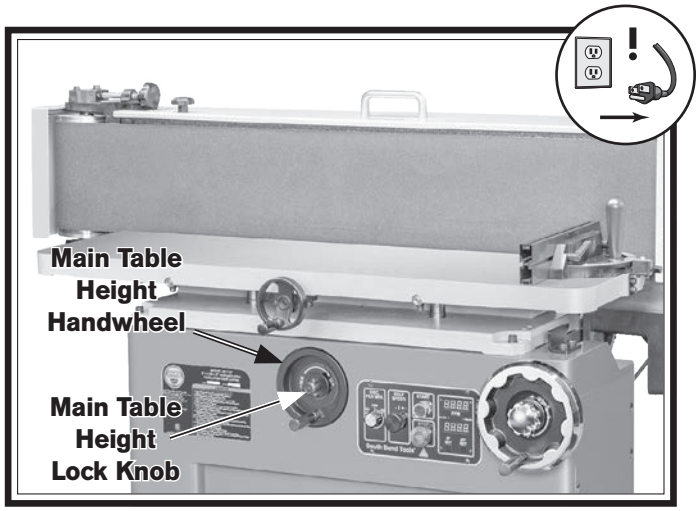


Figure 37. Main table height adjustment controls.

4. Tighten main table height lock knob to secure.

5. Main table clearance MUST be adjusted to within 1/16" of sanding belt before platen sanding. Proceed to **Adjusting Main Table Clearance** before proceeding with platen sanding operation.

Adjusting Main Table Clearance

The clearance between the main table and the sanding belt must never exceed 1/16" to minimize the risk of pinch points for fingers or workpieces. Check the main table clearance any time the main table height or the platen tilt has been adjusted.

To adjust main table clearance:

1. DISCONNECT MACHINE FROM POWER!

2. Adjust main table clearance handwheel (see **Figure 38**) until there is a gap of no more than 1/16" between table and sanding belt.

   — Turn handwheel clockwise to increase clearance.

   — Turn handwheel counterclockwise to decrease clearance.

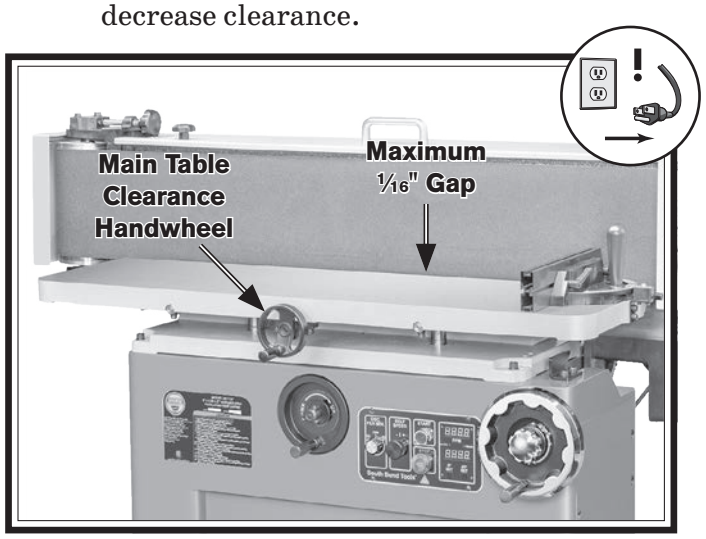


Figure 38. Location of main table clearance handwheel.

Adjusting End Table Height

The end table has 7" of vertical travel to accommodate a wide range of workpieces and to prolong sanding belt life.

To adjust end table height:

1. DISCONNECT MACHINE FROM POWER!

2. Loosen drive roller door lock knob (see **Figure 39**).

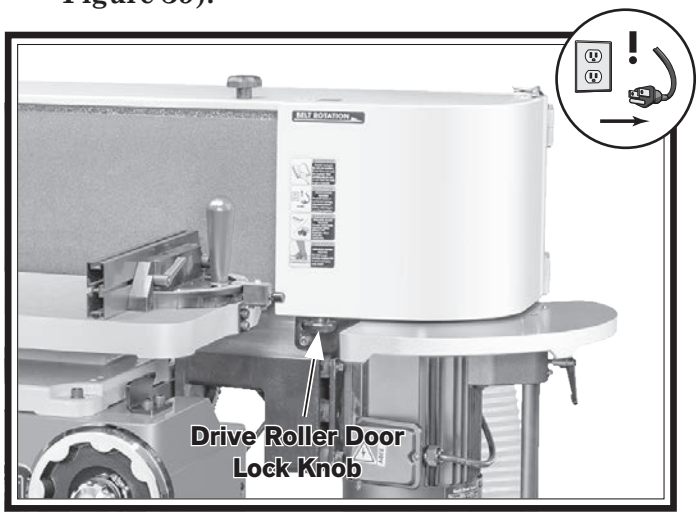


Figure 39. Location of drive roller door lock knob.

3. Open drive roller door and use latch shown in **Figure 40** to secure it open.

4. Loosen end table height lock handle (see **Figure 40**), adjust table as desired, then tighten lock handle to secure.

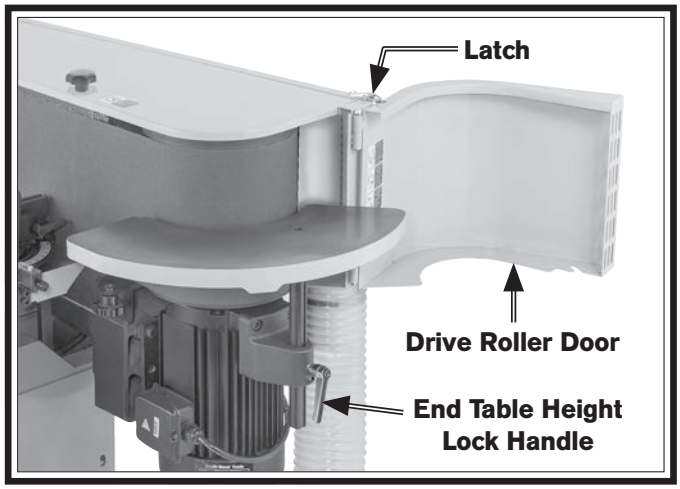


Figure 40. Drive roller door secured open.

Adjusting Miter Stop

The main table has a miter stop that adjusts between 0°–60° and has an adjustable fence (see **Figure 41**) for supporting the workpieces against the platen when it is perpendicular to the table.

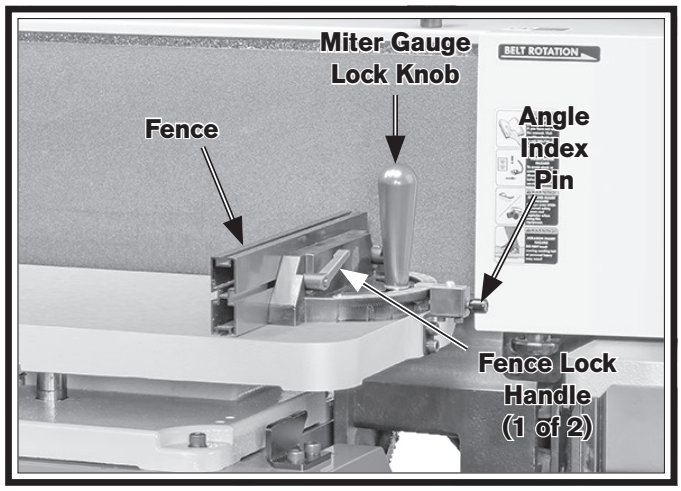


Figure 41. Main table miter stop.

The existing adjustable fence is most effective when the platen and miter gauge are adjusted to 0°. See **Making an Auxiliary Fence** on **Page 27** to replace the existing fence with a shop-made one for operations that require a tilted platen and for more information on the risks angled operations present.

If adjusting the miter stop angle for your operation requires the existing fence to be more than 1/16" from the sanding belt anywhere along it's height, consider making a miter angle auxiliary fence that will minimize the pinch point similar to the one described in **Making an Auxiliary Fence**.

To adjust miter stop:

1. DISCONNECT MACHINE FROM POWER!

2. Loosen miter gauge lock knob and (2) fence lock handles (see **Figure 41**).

3. Pull angle index pin out and rotate it until indicator displays desired angle (see **Figure 41**).

Note: *There are index stop notches at 0°, 30°, and 45° for quick adjustments.*

4. Tighten miter gauge lock knob to secure angle setting.

5. Adjust fence until there is a gap of no more than 1/16" between fence and sanding belt (see **Figure 41** on **Page 30**).

6. Tighten (2) fence lock handles to secure fence.

Edge & End Sanding

Proper use of the oscillating edge sander will yield excellent sanding results due to the oscillating movement. Always use the miter stop to support the workpiece whenever possible. Edge and end sanding operations are performed on the main table against the platen.

⚠WARNING

Moving sanding belt can cause serious personal injury if it comes in contact with fingers, hands, or other body parts. Make sure workpiece is always supported against table. Use extreme care to provide safe distance between sanding belt and any part of your body.

⚠CAUTION

If you must feed workpiece into sanding belt corner first, feed trailing corner first. Feeding leading corner first could cause sanding belt to grab workpiece and jerk it out of your hands.

To edge or end sand:

1. DISCONNECT MACHINE FROM POWER!

2. Adjust main table height as desired, then adjust main table clearance to 1/16" or less (see **Adjusting Main Table** on **Page 29**).

3. Connect machine to power, turn it ***ON***, and allow it to reach full speed.

4. Support workpiece against miter stop and slowly feed workpiece into moving sanding belt with light, even pressure. Maintain control of workpiece, as shown in **Figures 42–43**. DO NOT force workpiece against sanding belt.

Figure 42. Typical edge sanding operation.

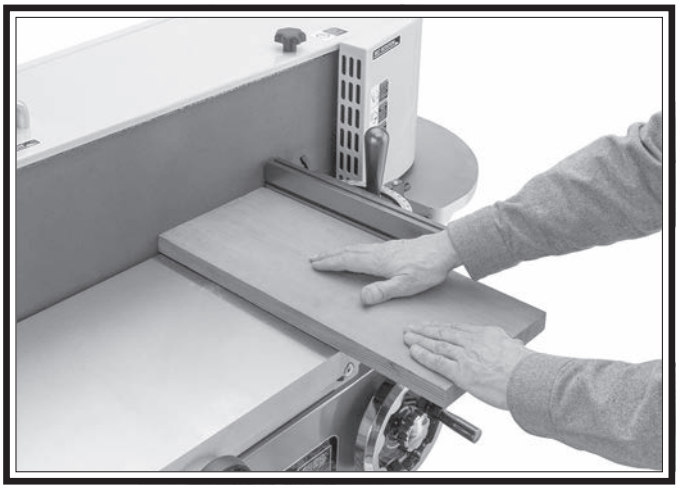


Figure 43. Typical end sanding operation.

Bevel Sanding

Adjust the platen tilt to match the angle you wish to sand on a workpiece, then use two hands to sand the workpiece on the main table against the platen.

See **Making an Auxiliary Fence** on **Page 27** to replace the existing fence with a shop-made one for operations that require a tilted platen and for more information on the risks angled operations present.

To bevel sand:

1. Adjust platen tilt to desired bevel angle of workpiece (see **Adjusting Platen Tilt** on **Page 26**).

2. DISCONNECT MACHINE FROM POWER!

3. Adjust main table height as desired, then adjust main table clearance to 1/16" or less (see **Adjusting Main Table** on **Page 29**).

4. Connect machine to power, turn it ***ON***, and allow it to reach full speed.

5. Support workpiece with table (and miter stop if operation allows), and slowly feed workpiece into moving sanding belt with light, even pressure (see **Figure 44**). DO NOT force workpiece against sanding belt.

Figure 44. Typical bevel sanding operation.

Contour Sanding

Contour sanding operations are performed on the end table with the workpiece pressing against the drive roller. Always use two hands to maintain the best control.

To contour sand:

1. DISCONNECT MACHINE FROM POWER!

2. Open drive roller door and adjust end table height as desired (see **Adjusting End Table Height** on **Page 30**).

3. Connect machine to power, turn it ***ON***, and allow it to reach full speed.

4. While securely holding workpiece, slowly feed workpiece into moving sanding belt with light, even pressure. Maintain control of workpiece, as shown in **Figure 45**. DO NOT force workpiece against sanding belt.

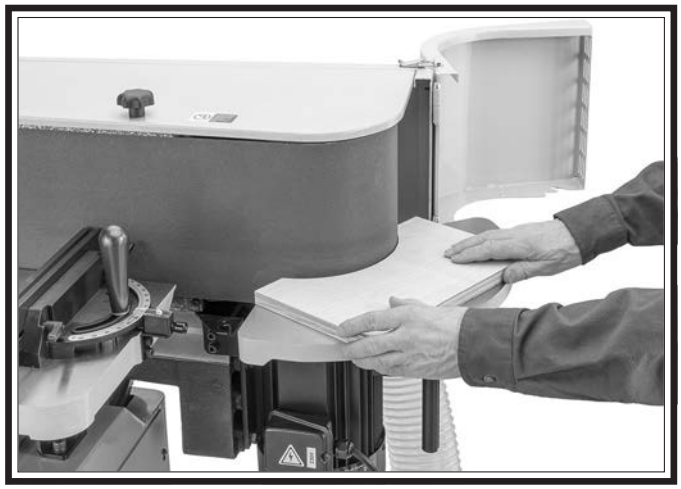
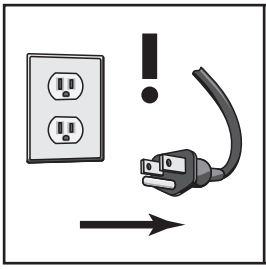


Figure 45. Typical contour sanding operation.

Maintenance Schedule



⚠WARNING

Always disconnect machine from power before performing maintenance or serious personal injury may result.

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

Ongoing

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:

- Loose mounting bolts.
- Damaged or dirty sanding belt.
- Worn or damaged wires.
- Dirty or unprotected cast-iron surfaces.
- Any other unsafe condition.

Weekly Maintenance

- Clean/vacuum dust buildup from inside cabinet and belt guard and off of motor.

Monthly Maintenance

- Lubricate table adjustment components **(Page 34)**.
- Lubricate platen tilt components **(Page 35)**.

Cleaning & Protecting

Cleaning the Model SB1127 is relatively easy. Vacuum excess 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.

Protect the unpainted cast iron table by wiping them clean after every use—this ensures moisture from wood dust does not remain on bare metal surfaces. Keep the tables rust-free with regular applications of quality metal protectants.

Cleaning Sanding Belts

As sanding belts are used, they will quickly become "loaded" with sawdust. If not removed, this sawdust will harden on the abrasive surface, rendering the sanding belt useless. Routinely clean the sanding belts with a rubber gum abrasive surface cleaner .

Always discard worn sanding belts. As abrasive belts begin to wear, grit will begin to fall off, causing deep gouges in the workpiece. Glue used to hold the grit to the sanding belt will rub off onto the workpiece, causing burns and interference with final finishing.

NOTICE

Contrary to some beliefs, worn abrasive belts are not equivalent to next finer grit abrasive. Discard worn sanding belts and avoid temptation to use them beyond their usable life.

Lubrication

An essential part of lubrication is cleaning the components before lubricating them. This step is critical because dust builds 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 mentioned in this section with an oil/grease solvent cleaner or mineral spirits before applying lubrication.

Table Adjustment Components

Items Needed	Qty
Disposable Rags	As Needed
Stiff Brushes	2
Mineral Spirits	As Needed
T26419 or NLGI#2 Equiv	Thin Coat
SB1365 or ISO 68 Equiv.	Thin Coat

To lubricate table adjustment components:

1. DISCONNECT MACHINE FROM POWER!

2. Adjust main table as high as it will go and increase table clearance all the way.

3. Open rear cabinet door (see **Figure 46**).

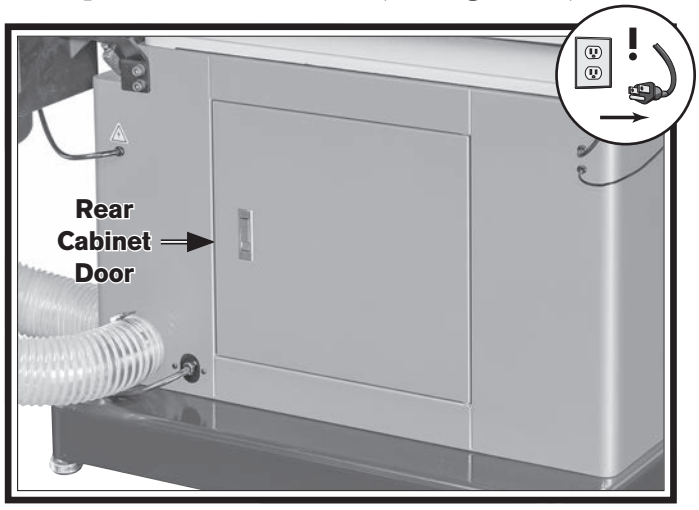


Figure 46. Location of rear cabinet door.

4. Clean table adjustment leadscrews, columns, and bevel gears (see **Figures 47–48**) with rags, brush, and mineral spirits to remove grime and old lubrication.

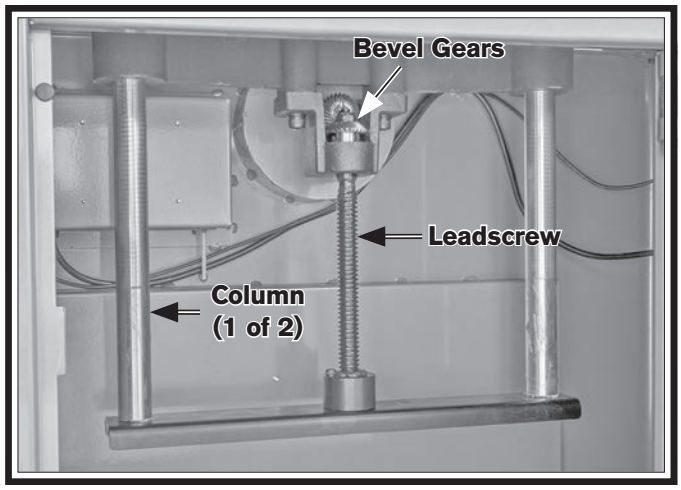


Figure 47. Table height components to lubricate.

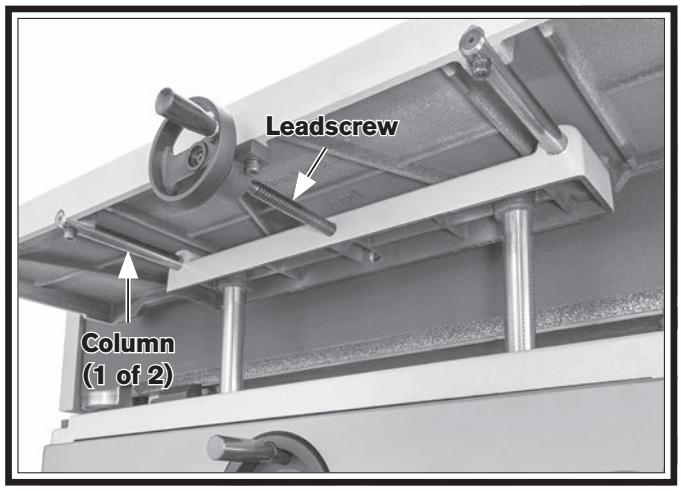


Figure 48. Table clearance components to lubricate.

5. Use clean brush to wipe leadscrew and bevel gear teeth with thin coat of NLGI#2 grease.

6. Use clean rags to wipe columns with thin coat of ISO 68 way oil.

7. Close rear cabinet door.

8. Adjust main table height and clearance through their full ranges of travel to spread lubricants and ensure smooth movement.

9. Main table clearance MUST be adjusted to within $\frac{1}{16}$" of sanding belt before operating. Refer to **Adjusting Main Table** on **Page 29** to adjust clearance.

Platen Tilt Components

Items Needed	Qty
Hex Wrench 4mm	1
Stiff Brushes	2
Mineral Spirits	As Needed
T26419 or NLGI#2 Equiv	Thin Coat

To lubricate platen tilt components:

1. Adjust platen tilt to 0°.
2. DISCONNECT MACHINE FROM POWER!
3. Loosen (4) screws shown in **Figure 49** and remove cabinet panel.

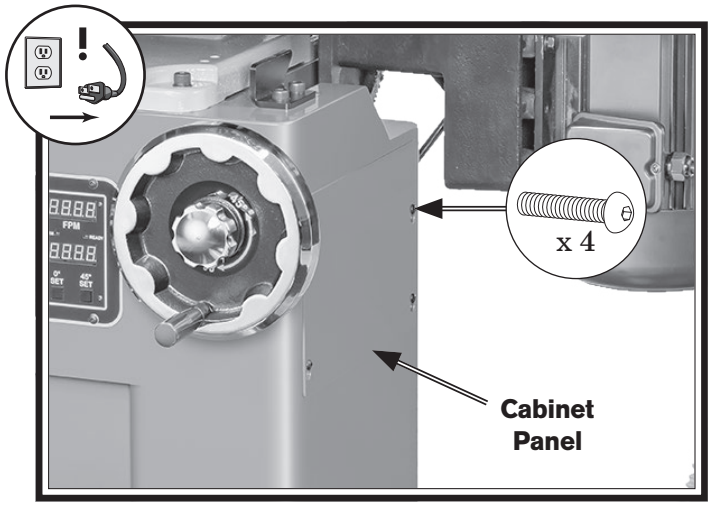


Figure 49. Location of cabinet panel and screws.

4. Clean platen tilt trunnion and worm gear teeth (see **Figure 50**) with brush and mineral spirits to remove grime and old lubrication.

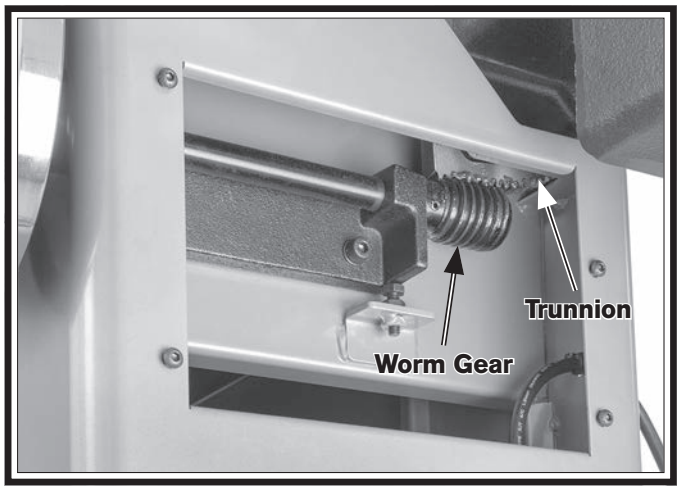


Figure 50. Location of platen tilt trunnion and worm gear.

5. Use clean brush to wipe trunnion and worm gear teeth with thin coat of NLGI#2 grease.
6. Adjust platen through its full range of tilt travel to spread grease and ensure smooth movement, then install cabinet panel.

Machine Storage

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

Preparing Machine for Storage

1. Disconnect all power sources to machine.
2. Remove sanding belt from machine and store flat in cool, dry area.
3. Thoroughly clean all unpainted, bare metal surfaces, then coat them with a lightweight grease or rust preventative. Take care to ensure these surfaces are completely covered but that the 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 good grade of medium-weight machine oil (not auto engine oil) in place of grease or rust preventative.*
4. 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 sunlight.

Bringing Machine Out of Storage

1. Clean rust preventative off of machine (refer to **Cleaning & Protecting** on **Page 16**).
2. Install sanding belt.
3. Perform **Test Run** on **Page 19**.

Adjusting Platen Tilt Stops

The Model SB1127 features stop bolts that stop the platen exactly at 45° and 90° during platen tilt adjustments. The stops have been set at the factory and should not require adjustments unless you notice that beveled workpieces are not accurate after being sanded.

Note: *The platen tilt digital readout reads 0° when the platen is 90° to the table.*

Adjusting 90° Stop Bolt

Items Needed **Qty**
Open-End Wrenches 13mm 2
90° Square 1

To adjust 90° stop bolt:

1. Adjust platen tilt to 0°.
2. DISCONNECT MACHINE FROM POWER!
3. Remove sanding belt.
4. Adjust table clearance so table is within 1/16" of platen.
5. Place 90° square against table and platen, as shown in **Figure 51**.

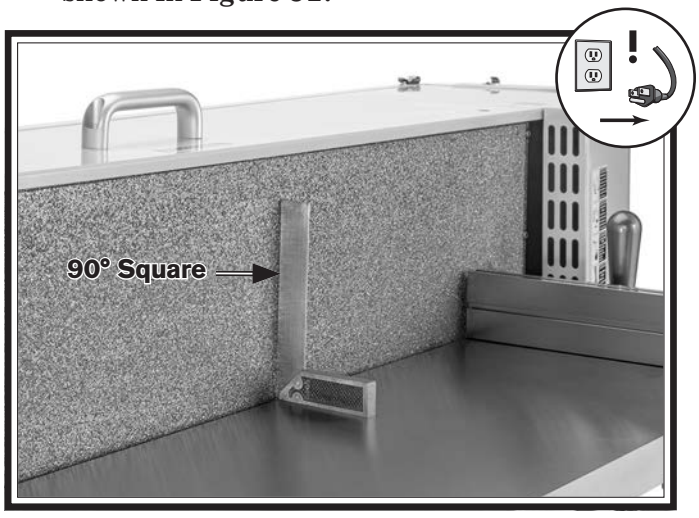


Figure 51. Checking platen with 90° square.

— If platen *is* 90° to table, no adjustment is required.

— If platen *is not* 90° to table, proceed to **Step 6**.

6. Loosen jam nut on 90° stop bolt shown in **Figure 52**, and adjust 90° stop bolt until platen is 90° to table when bolt contacts stop plate.

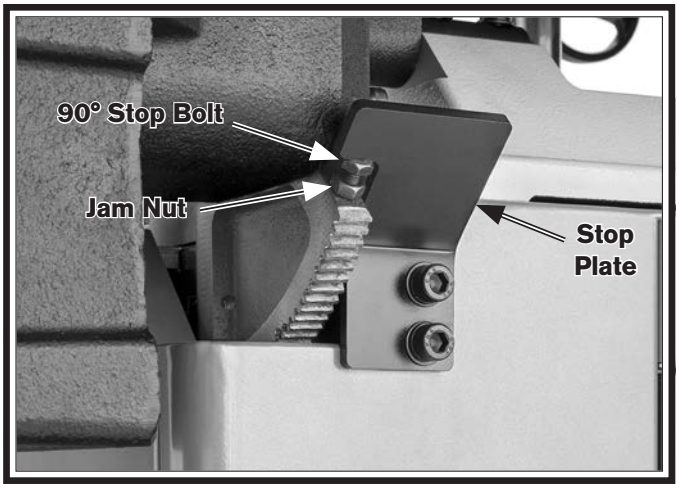


Figure 52. Location of 90° stop bolt and jam nut.

7. Tighten jam nut without turning stop bolt to secure setting.
8. Connect machine to power.
9. Press 0° set button to set platen tilt digital readout display to 0° (see **Figure 53**).

Figure 53. Location of platen tilt calibration components.

Adjusting 45° Stop Bolt

Items Needed **Qty**
Open-End Wrenches 13mm 2
45˚ Square 1

To adjust 45° stop bolt:

1. Adjust platen tilt to 45˚.
2. DISCONNECT MACHINE FROM POWER!
3. Remove sanding belt.
4. Adjust table clearance so table is within 1/16" of platen.
5. Place 45˚ square against table and platen, as shown in **Figure 54**.

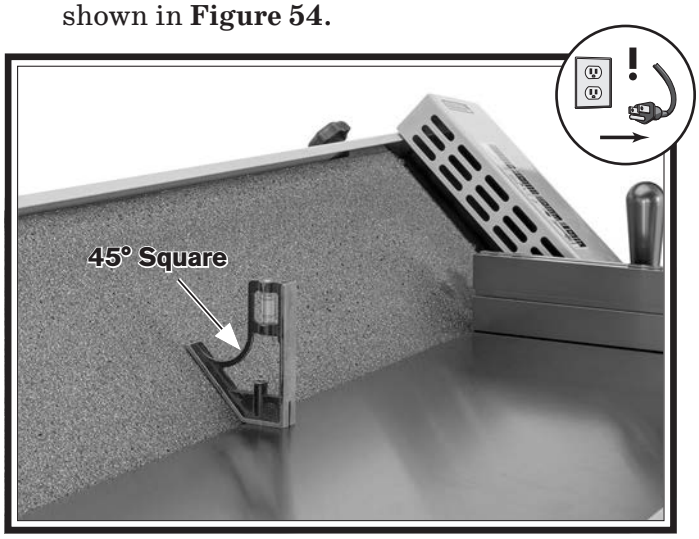


Figure 54. Checking platen with 45° square.

— If platen *is* 45˚ to table, no adjustment is required.

— If platen *is not* 45˚ to table, proceed to **Step 6**.

6. Loosen jam nut on 45˚ stop bolt shown in **Figure 55**, and adjust 45˚ stop bolt until platen is 45˚ to table when bolt contacts stop plate.

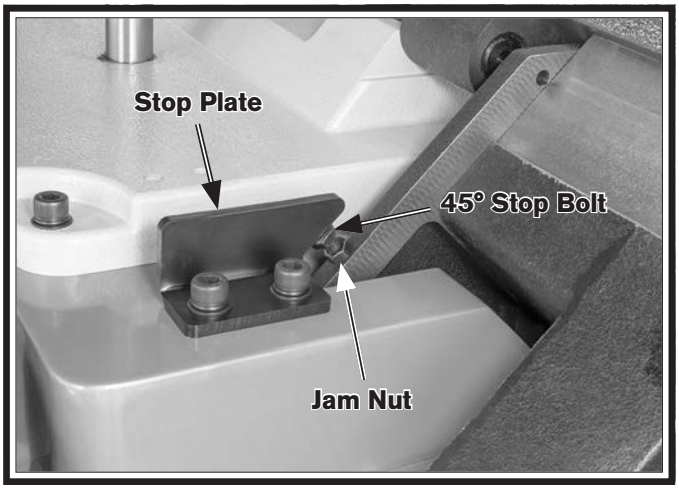


Figure 55. Location of 45° stop bolt and jam nut.

7. Tighten jam nut without turning stop bolt to secure setting.
8. Connect machine to power.
9. Press 45˚ set button to set platen tilt digital readout display to 45˚ (see **Figure 56**).

Figure 56. Location of platen tilt calibration components.

Calibrating Miter Stop

This procedure ensures the miter stop angle is accurate.

Items Needed	Qty
90° Square	1
Phillips Head Screwdriver #2	1

To calibrate miter gauge:

1. Adjust platen tilt to 0°.
2. DISCONNECT MACHINE FROM POWER!
3. Remove sanding belt.
4. Loosen miter gauge lock knob.
5. Set one edge of 90° square against platen and adjust miter gauge angle until the other edge is flat against miter stop fence (see **Figure 57**).
   - — If miter gauge indicator displays 0° when miter fence is 90° to platen, no calibration is required.
   - — If miter gauge indicator *does not* display 0° when miter fence is 90° to platen, proceed to **Step 6**.
6. Loosen indicator screw (see **Figure 57**), adjust pointer to 0°, then tighten screw.

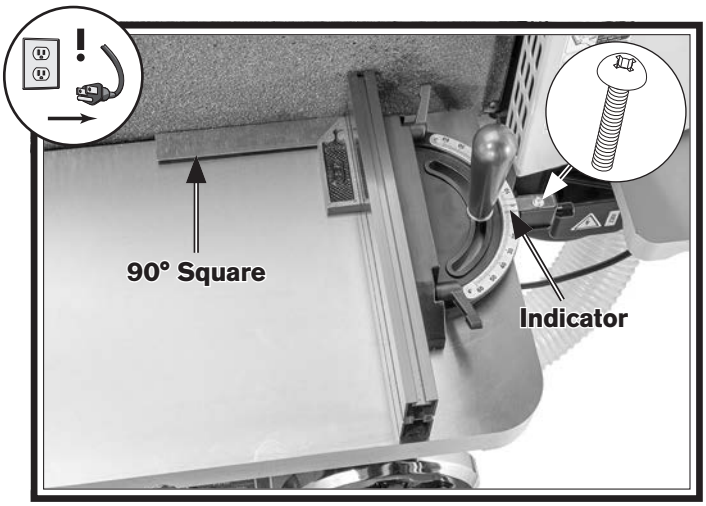


Figure 57. Miter stop calibration components.

Replacing Oscillation Motor Brushes

The oscillation motor uses two carbon brushes to transmit electrical current inside the motor. These brushes are considered regular "wear items" or "consumables" that will need to be replaced during the life of the motor. The frequency of required replacement is often related to how much the motor is used and how hard it is pushed.

Replace the carbon brushes at the same time when the motor no longer reaches full power, or when the brushes measure less than ½" long (new brushes are 11/16" long).

If your machine is used frequently, we recommend keeping an extra set of these replacement brushes on-hand to avoid any downtime.

Items Needed	Qty
Flat Head Screwdriver ¼"	1
Replacement Brush Pair (PSB1127056-1)	1

To replace oscillation motor brushes:

1. DISCONNECT MACHINE FROM POWER!
2. Remove brush caps and worn brushes from oscillation motor (see **Figure 58**).

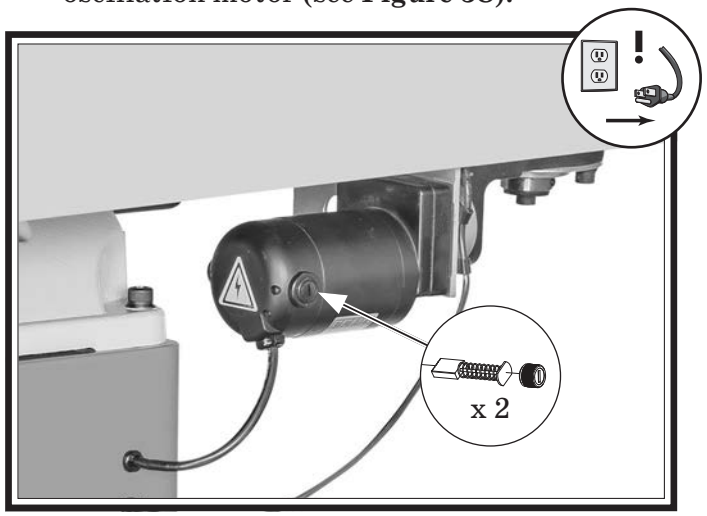


Figure 58. Location of brush caps on oscillation motor.

3. Replace both motor brushes and install brush caps.

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 power supply breaker immediately trips after startup.	1. STOP button depressed. 2. Incorrect power supply voltage or circuit size. 3. Sanding belt speed potentiometer at fault. 4. Power supply circuit breaker tripped or fuse blown. 5. Motor wires connected incorrectly. 6. Contactor not energized/at fault. 7. Wiring broken, disconnected, or corroded. 8. START or STOP button at fault. 9. Circuit board at fault. 10. VFD at fault. 11. Main motor or motor bearings at fault.	1. Rotate STOP button head to reset. 2. Ensure correct power supply voltage and circuit size **(Page 12)**. 3. Test/replace if at fault. 4. Ensure circuit is free of shorts. Reset circuit breaker or replace fuse. 5. Correct motor wiring connections **(Page 42)**. 6. Test all legs for power; replace if necessary. 7. Fix broken wires or disconnected/corroded connections **(Page 42)**. 8. Replace button. 9. Inspect/replace if at fault. 10. Inspect VFD; replace if at fault. 11. Replace main motor.
Main motor starts, but oscillation motor does not.	1. Contactor not energized/at fault. 2. Wiring broken, disconnected, or corroded. 3. Motor brushes worn out. 4. Circuit board at fault. 5. Oscillation motor or motor bearings at fault.	1. Test all legs for power; replace if necessary. 2. Fix broken wires or disconnected/corroded connections **(Page 42)**. 3. Remove/replace motor brushes **(Page 38)**. 4. Inspect/replace if at fault. 5. Replace oscillation motor.
Main motor stalls or is underpowered.	1. Workpiece unsuitable for machine. 2. Circuit board at fault. 3. Sanding belt speed potentiometer at fault. 4. Motor wires connected incorrectly. 5. Machine undersized for task. 6. Motor overheated. 7. Extension cord too long. 8. Contactor not energized/at fault. 9. Main motor or motor bearings at fault.	1. Only sand wood/ensure moisture is below 20% **(Page 22)**. 2. Inspect/replace if at fault. 3. Test/replace if at fault. 4. Correct motor wiring connections **(Page 42)**. 5. Clean **(Page 33)**/replace **(Page 23)** sanding belt; reduce feed rate/sanding depth. 6. Clean motor, let cool, and reduce workload. 7. Move machine closer to power supply; use shorter extension cord **(Page 13)**. 8. Test all legs for power; repair/replace if at fault. 9. Replace main motor.
Oscillation motor stalls or is underpowered.	1. Circuit board at fault. 2. Motor brushes worn out. 3. Motor overheated. 4. Contactor not energized/at fault. 5. Oscillation motor or motor bearings at fault.	1. Inspect/replace if at fault. 2. Remove/replace motor brushes **(Page 38)**. 3. Clean motor, let cool, and reduce workload. 4. Test all legs for power; repair/replace if at fault. 5. Replace oscillation motor.

Symptom	Possible Cause	Possible Solution
Machine has vibration or noisy operation.	**1.** Motor or component loose.	**1.** Replace damaged or missing bolts/nuts or tighten if loose.
	2. Drive roller cap screw is missing or loose.	**2.** Inspect key. Replace or tighten cap screw if necessary.
	3. Stand feet not adjusted correctly.	**3.** Adjust stand feet to stabilize machine.
	4. Motor mount loose/broken.	**4.** Tighten/replace.
	5. Motor fan rubbing on fan cover.	**5.** Fix/replace fan cover; replace loose/damaged fan.
	6. Motor bearings at fault.	**6.** Test by rotating shaft; rotational grinding/loose shaft requires bearing replacement.
Sanding belt speed digital readout does not work/display is incorrect.	**1.** Sanding belt speed potentiometer is at fault.	**1.** Test/replace if at fault.
	2. Wiring broken, disconnected, or corroded.	**2.** Fix broken wires or disconnected/corroded connections **(Page 42)**.
	3. Digital readout is at fault.	**3.** Replace digital readout
	4. Circuit board is at fault.	**4.** Inspect/replace if at fault.
Platen tilt digital readout display is incorrect.	**1.** Digital readout needs to be reset.	**1.** Adjust platen perpendicular to table, then press 0° set button to reset readout.
	2. Digital readout was reset when platen tilt stops were adjusted incorrectly.	**2.** Adjust platen tilt stops **(Page 36)**.
	3. Tilt sensor is adjusted incorrectly.	**3.** Adjust tilt sensor position.
	4. Wiring broken, disconnected, or corroded.	**4.** Fix broken wires or disconnected/corroded connections **(Page 42)**.
	5. Tilt sensor at fault.	**5.** Replace sensor.
	6. Digital readout is at fault.	**6.** Replace digital readout.
Sanding belt slaps or vibrates excessively.	**1.** Incorrect sanding belt tension.	**1.** Make sure tension lever is engaged **(Page 23)**.
	2. Belt tracking needs adjustment.	**2.** Adjust sanding belt tracking **(Page 25)**.
	3. Broken/defective sanding belt.	**3.** Replace sanding belt **(Page 23)**.
	4. Idler or drive roller is loose.	**4.** Tighten idler roller or drive roller.
	5. Weak or broken tension spring.	**5.** Replace spring.
Sanding belt does not track correctly.	**1.** Belt tracking needs adjustment.	**1.** Adjust sanding belt tracking **(Page 25)**.
	2. Incorrect sanding belt tension.	**2.** Make sure tension lever is engaged **(Page 23)**.
	3. Belt damaged, worn, or misshapen.	**3.** Replace sanding belt **(Page 23)**.
	4. Oscillation sensor at fault.	**4.** Replace sensor.
	5. Oscillation motor at fault.	**5.** Replace oscillation motor.
Deep sanding grooves or scores in workpiece.	**1.** Excessive sanding speed.	**1.** Decrease sanding speed.
	2. Using too coarse of sanding grit.	**2.** Use finer grit sanding belt **(Page 23)**.
	3. Workpiece sanded across grain.	**3.** Sand with workpiece grain.
	4. Too much pressure against belt.	**4.** Reduce pressure on workpiece while sanding.
	5. Workpiece held still for too long.	**5.** Do not keep workpiece in one place for too long.
	6. Graphite pad on platen damaged.	**6.** Replace graphite pad.
Abrasive grit rubs off sanding belt easily.	**1.** Sanding belt has been stored in an incorrect environment.	**1.** Replace sanding belt **(Page 23)**. Store sanding belt in a cool, dry area.
	2. Sanding belt has been folded or crushed.	**2.** Replace sanding belt **(Page 23)**. Store sanding belt flat, not folded or bent.

Symptom	Possible Cause	Possible Solution
Sanding belt surfaces clog quickly or burn.	**1.** Excessive sanding speed. **2.** Worn sanding belt. **3.** Too much pressure against belt. **4.** Sanding softwood. **5.** Workpiece has high moisture content or sap. **6.** Using too fine of sanding grit. **7.** Poor dust collection.	**1.** Decrease sanding speed. **2.** Replace sanding belt **(Page 23)**. **3.** Reduce pressure on workpiece while sanding. **4.** Use different stock or accept characteristics of workpiece and plan on cleaning **(Page 33)**/ replacing belt **(Page 23)** frequently. **5.** Use different stock or accept characteristics of workpiece and plan on cleaning **(Page 33)**/ replacing belt **(Page 23)** frequently. **6.** Use coarser grit sanding belt **(Page 23)**. **7.** Unclog ducts; close gates to improve suction; redesign dust collection system.
Burn marks on workpiece.	**1.** Excessive sanding speed. **2.** Using too fine of sanding grit. **3.** Too much pressure against belt. **4.** Workpiece held still for too long. **5.** Sanding belt loaded with sawdust, resin, and/or pitch.	**1.** Decrease sanding speed. **2.** Use coarser grit sanding belt **(Page 23)**. **3.** Reduce pressure on workpiece while sanding. **4.** Do not keep workpiece in one place for too long. **5.** Clean **(Page 33)** or replace belt **(Page 23)**.
Glazed sanding surfaces.	**1.** Sanding wet stock. **2.** Sanding stock with high pitch/ residue. **3.** Belt worn or filled with pitch/ residue.	**1.** Dry properly before sanding **(Page 22)**. **2.** Use different stock or accept characteristics of workpiece and plan on cleaning **(Page 33)**/ replacing belt **(Page 23)** frequently. **3.** Replace belt **(Page 23)** or clean pitch/residue from belt **(Page 33)**.
Workpiece frequently gets pulled out of your hand.	**1.** Not supporting workpiece properly. **2.** Starting workpiece on a leading corner.	**1.** Use miter stop to support workpiece. **2.** Start workpiece on a trailing corner.
Snake-shaped marks on workpiece.	**1.** Sanding belt loaded with sawdust, resin, and/or pitch. **2.** Sanding belt damaged.	**1.** Clean **(Page 33)** or replace belt **(Page 23)**. **2.** Replace sanding belt **(Page 23)**.
Sanding surface not square when miter stop is set to 0˚.	**1.** Miter stop not perpendicular to platen/belt when set to 0˚.	**1.** Calibrate miter stop **(Page 38)**.
Platen tilt handwheel is hard to rotate.	**1.** Platen tilt trunnion and worm gear are dirty/need lubrication.	**1.** Clean and lubricate trunnion and worm gear **(Page 34)**.
Main table height handwheel is hard to rotate.	**1.** Main table height leadscrew, bevel gears, and columns are dirty/need lubrication.	**1.** Clean and lubricate leadscrew, bevel gears, and column **(Page 34)**.
Table clearance handwheel is hard to rotate.	**1.** Table clearance leadscrew and columns are dirty/need lubrication.	**1.** Clean and lubricate leadscrew and columns **(Page 34)**.

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.

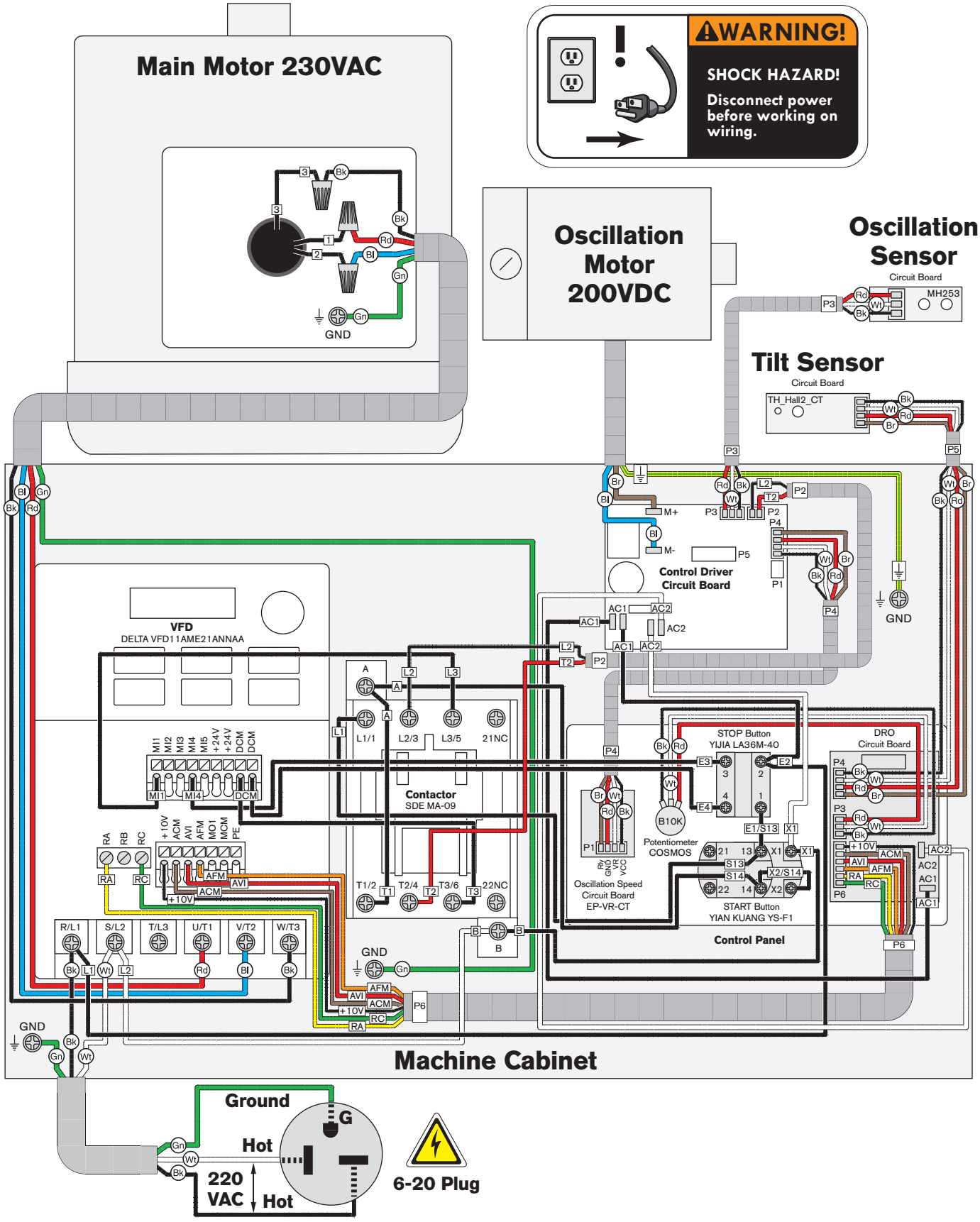
Experiencing Difficulties: If you are experiencing difficulties understanding the information included in this section, contact our Technical Support at (360) 734-1540.

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.southbendtools.com.**

Wiring Diagram



Electrical Components

Figure 59. Main motor wiring.

Figure 61. Oscillation motor and sensor.

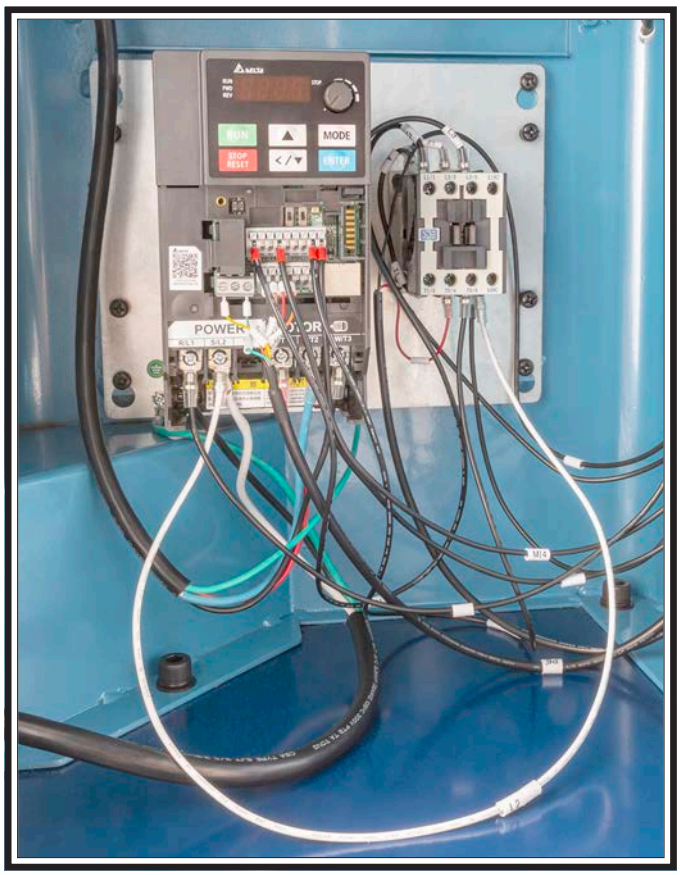


Figure 60. VFD and contactor wiring.

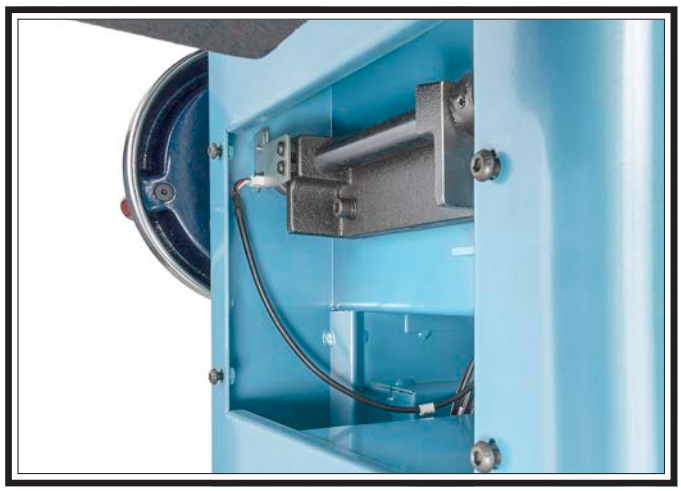


Figure 62. Tilt sensor.

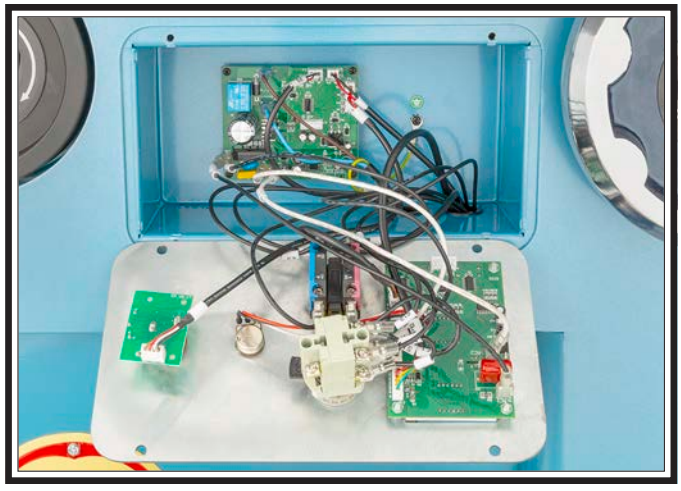
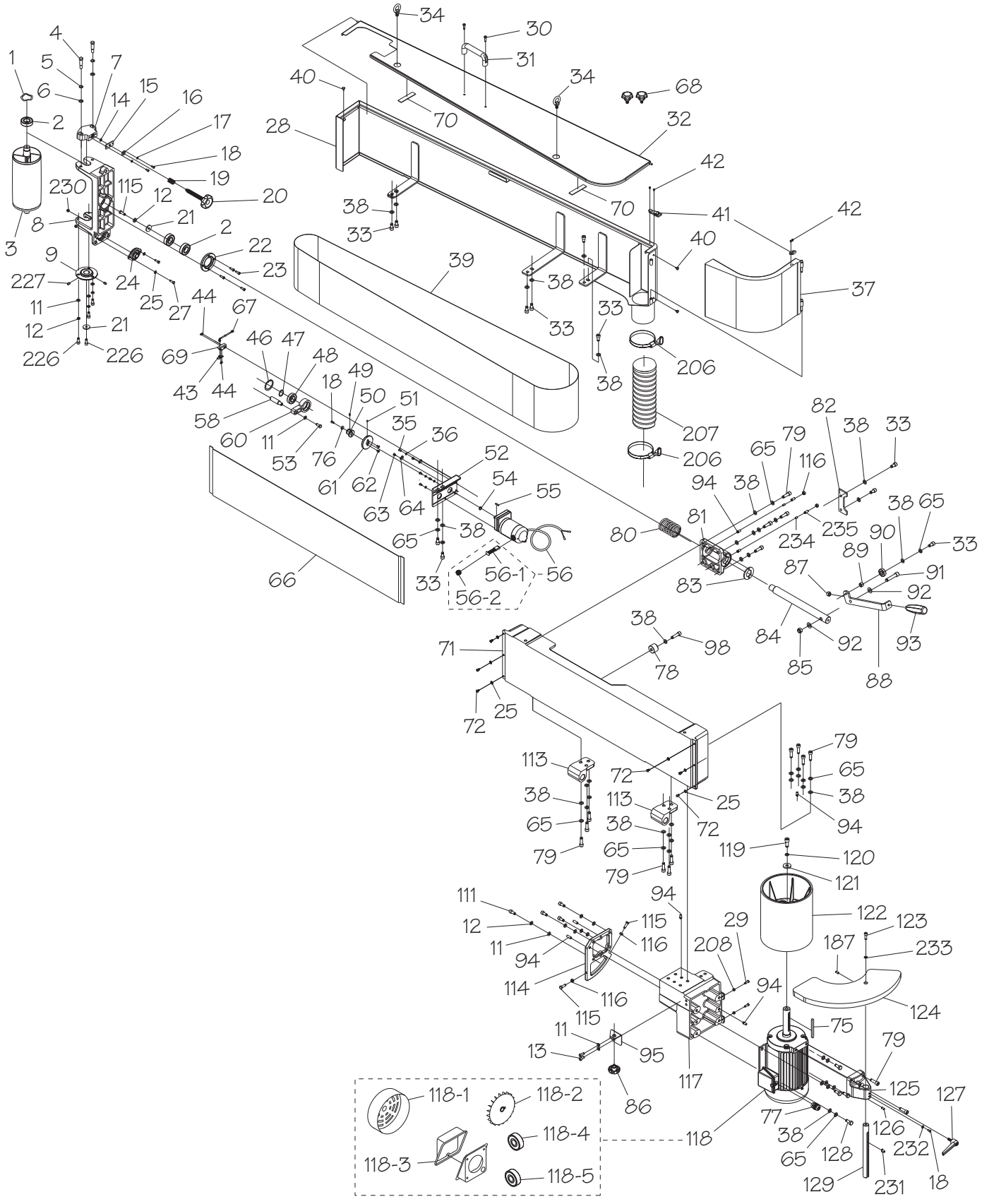


Figure 63. Control panel wiring.

Platen & Rollers



Platen & Rollers Parts List

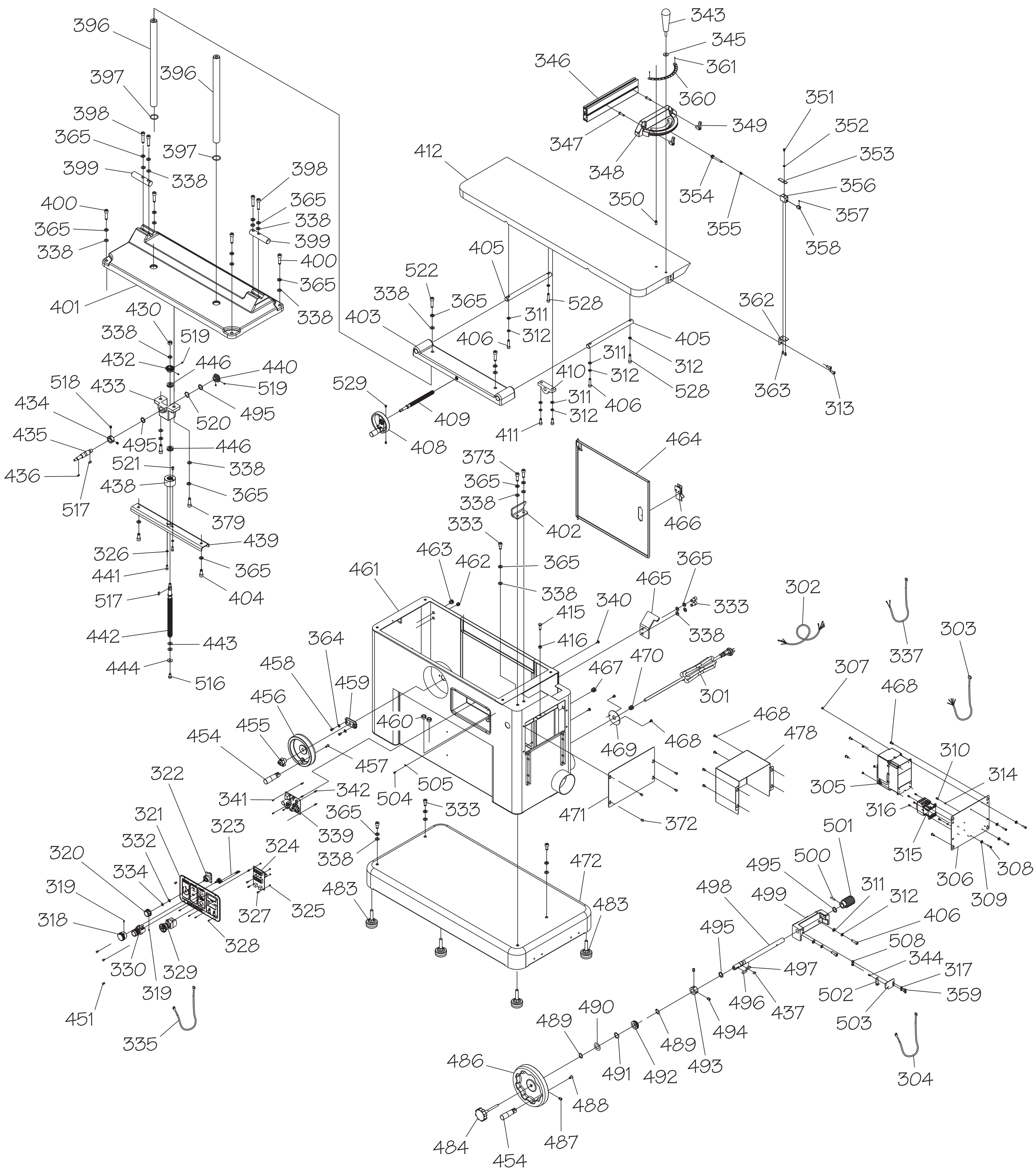
REF	PART #	DESCRIPTION
1	PSB1127001	WAVY WASHER 50.2MM
2	PSB1127002	BALL BEARING 6205-2NSE
3	PSB1127003	IDLER ROLLER
4	PSB1127004	SHOULDER BOLT M10-1.5 X 19.5, 12 X 54.5
5	PSB1127005	WAVY WASHER 12.5MM
6	PSB1127006	FLAT WASHER 12.1 X 18.7 X 1MM
7	PSB1127007	TRACKING BRACKET
8	PSB1127008	IDLER ROLLER BRACKET
9	PSB1127009	PILLOW BEARING SBPF205
11	PSB1127011	FLAT WASHER 8MM
12	PSB1127012	LOCK WASHER 8MM
13	PSB1127013	CAP SCREW M8-1.25 X 16
14	PSB1127014	EXT RETAINING RING 9MM
15	PSB1127015	MOUNTING BLOCK
16	PSB1127016	FLAT WASHER 3/8
17	PSB1127017	FLAT WASHER 5MM
18	PSB1127018	CAP SCREW M5-.8 X 10
19	PSB1127019	COMPRESSION SPRING 1.8 X 18.6 X 30
20	PSB1127020	KNOB BOLT M14-2 X 104, 6-LOBE, D62
21	PSB1127021	SPACER 8.2 X 20 X 4MM
22	PSB1127022	BEARING HOUSING
23	PSB1127023	CAP SCREW M6-1 X 16
24	PSB1127024	PILLOW BEARING SBPFL203
25	PSB1127025	FLAT WASHER 6MM
27	PSB1127027	HEX BOLT M6-1 X 30
28	PSB1127028	GUARD HOUSING
29	PSB1127029	HEX BOLT M6-1 X 25
30	PSB1127030	CAP SCREW M6-1 X 20
31	PSB1127031	BELT GUARD HANDLE
32	PSB1127032	BELT GUARD
33	PSB1127033	CAP SCREW M10-1.5 X 20
34	PSB1127034	EYE BOLT 1", M10-1.5 X 20
35	PSB1127035	BUTTON HD CAP SCR M5-.8 X 10
36	PSB1127036	LOCK WASHER 5MM
37	PSB1127037	DRIVE ROLLER DOOR
38	PSB1127038	FLAT WASHER 10MM
39	PSB1127039	SANDING BELT 9" X 138-1/2" 120-GRIT
40	PSB1127040	RUBBER BUMPER
41	PSB1127041	DRAW LATCH W/STRIKE PLATE
42	PSB1127042	FLAT HD SCR M3-.5 X 6
43	PSB1127043	OSC SENSOR CIRCUIT BOARD MH253
44	PSB1127044	PHLP HD SCR M3-.5 X 6
46	PSB1127046	INT RETAINING RING 47MM
47	PSB1127047	EXT RETAINING RING 25MM
48	PSB1127048	BALL BEARING 6005-2NSE
49	PSB1127049	SET SCREW M6-1 X 8
50	PSB1127050	BUSHING
51	PSB1127051	MAGNET 4 X 4MM
52	PSB1127052	OSCILLATION MOTOR MOUNT
53	PSB1127053	HEX BOLT M8-1.25 X 20
54	PSB1127054	EXT RETAINING RING 12MM
55	PSB1127055	KEY 4 X 4 X 20
56	PSB1127056	MOTOR 25W 200VDC W/CORD
56-1	PSB1127056-1	CARBON BRUSH (2-PC SET)
56-2	PSB1127056-2	CARBON BRUSH COVER
58	PSB1127058	OSCILLATION SHAFT
60	PSB1127060	OSCILLATION TRANSFER BRACKET
61	PSB1127061	PLATE
62	PSB1127062	FLAT HD CAP SCR M4-.7 X 10
63	PSB1127063	BUTTON HD CAP SCR M5-.8 X 8
64	PSB1127064	CORD CLAMP
65	PSB1127065	LOCK WASHER 10MM
66	PSB1127066	GRAPHITE PAD 10" X 47-5/8"
67	PSB1127067	OSCILLATION SENSOR CORD 24G 3W 71"
68	PSB1127068	KNOB BOLT M10-1.5 X 16, 7-LOBE, D50
69	PSB1127069	SENSOR MOUNTING BRACKET
70	PSB1127070	FOAM PAD 60 X 20 X 4MM
71	PSB1127071	PLATEN
72	PSB1127072	BUTTON HD CAP SCR M6-1 X 10
75	PSB1127075	KEY 8 X 7 X 100
76	PSB1127076	FENDER WASHER 5MM
77	PSB1127077	STRAIN RELIEF TYPE-3 PG13.5
78	PSB1127078	SPACER 10.5 X 35 X 30MM
79	PSB1127079	CAP SCREW M10-1.5 X 35
80	PSB1127080	COMPRESSION SPRING 6 X 58 X 110
81	PSB1127081	TENSION BRACKET
82	PSB1127082	SETTING PLATE
83	PSB1127083	TENSION LEVER PLATE
84	PSB1127084	DRAWBAR
85	PSB1127085	LOCK NUT M12-1.75
86	PSB1127086	KNOB BOLT M8-1.25 X 12, 5-LOBE, D48
87	PSB1127087	HEX NUT M10-1.5
88	PSB1127088	TENSION LEVER
89	PSB1127089	BUSHING
90	PSB1127090	BALL BEARING 6003ZZ
91	PSB1127091	CAP SCREW M12-1.75 X 60
92	PSB1127092	FLAT WASHER 12MM
93	PSB1127093	FIXED HANDLE 37.5 X 110, M10-1.5 X 15
94	PSB1127094	ROLL PIN 8 X 20
95	PSB1127095	DOOR LOCKING BRACKET
98	PSB1127098	CAP SCREW M10-1.5 X 45
111	PSB1127111	CAP SCREW M8-1.25 X 25
113	PSB1127113	PLATEN MOUNTING BRACKET
114	PSB1127114	TRUNNION
115	PSB1127115	HEX BOLT M8-1.25 X 25
116	PSB1127116	HEX NUT M8-1.25
117	PSB1127117	MOTOR MOUNT
118	PSB1127118	MOTOR 3HP 230V 3-PH
118-1	PSB1127118-1	MOTOR FAN COVER
118-2	PSB1127118-2	MOTOR FAN
118-3	PSB1127118-3	MOTOR JUNCTION BOX
118-4	PSB1127118-4	BALL BEARING 6207-2NSE (FRONT)
118-5	PSB1127118-5	BALL BEARING 6204-2NSE (REAR)
119	PSB1127119	CAP SCREW M12-1.75 X 30

Platen & Rollers Parts List (Cont.)

REF	PART #	DESCRIPTION
120	PSB1127120	LOCK WASHER 12MM
121	PSB1127121	FLAT WASHER 13 X 35 X 5MM
122	PSB1127122	DRIVE ROLLER
123	PSB1127123	CAP SCREW M8-1.25 X 25
124	PSB1127124	END TABLE
125	PSB1127125	END TABLE HEIGHT BRACKET
126	PSB1127126	SET SCREW M6-1 X 12
127	PSB1127127	ADJUSTABLE HANDLE M8-1.25 X 20, 63L
128	PSB1127128	HEX BOLT M10-1.5 X 25
129	PSB1127129	END TABLE HEIGHT COLUMN
187	PSB1127187	SET SCREW M6-1 X 12

REF	PART #	DESCRIPTION
206	PSB1127206	HOSE CLAMP 4"
207	PSB1127207	DUST HOSE 4" X 39"
208	PSB1127208	HEX NUT M6-1
226	PSB1127226	CAP SCREW M8-1.25 X 20
227	PSB1127227	SET SCREW M6-1 X 6
230	PSB1127230	LOCK NUT M6-1
231	PSB1127231	LOCATING PIN
232	PSB1127232	FLAT WASHER 5MM
233	PSB1127233	EXT TOOTH WASHER 8MM
234	PSB1127234	BUSHING
235	PSB1127235	SET SCREW M8-1.25 X 20

Cabinet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Cabinet Parts List

REF	PART #	DESCRIPTION
301	PSB1127301	POWER CORD 12G 3W 138" 6-20P
302	PSB1127302	MOTOR CORD 16G 4W 57"
303	PSB1127303	P6 CORD 24G 6W 39"
304	PSB1127304	P5 CORD 24G 4W 24"
305	PSB1127305	VFD DELTA VFD11AME21ANNAA
306	PSB1127306	ELECTRICAL MOUNTING BOARD
307	PSB1127307	HEX NUT M5-.8
308	PSB1127308	PHLP HD SCR M5-.8 X 20 PLASTIC
309	PSB1127309	FLAT WASHER 6.1 X 12.5 X 3.5MM
310	PSB1127310	BUTTON HD CAP SCR M4-.7 X 10
311	PSB1127311	FLAT WASHER 8MM
312	PSB1127312	LOCK WASHER 8MM
313	PSB1127313	CAP SCREW M8-1.25 X 16
314	PSB1127314	EXT TOOTH WASHER 4MM
315	PSB1127315	CONTACTOR SDE MA-09 220-240V
316	PSB1127316	BUTTON HD CAP SCR M4-.7 X 6
317	PSB1127317	FLAT WASHER 5MM
318	PSB1127318	BELT SPEED DIAL
319	PSB1127319	SET SCREW M4-.7 X 6
320	PSB1127320	OSCILLATION DIAL
321	PSB1127321	CONTROL PANEL
322	PSB1127322	CIRCUIT BOARD W/POTENTIOMETER EP-VR-CT
323	PSB1127323	POTENTIOMETER COSMOS B10K
324	PSB1127324	DRO LCM CIRCUIT BOARD
325	PSB1127325	HEX NUT M3-.5 PLASTIC
326	PSB1127326	LOCK WASHER 6MM
327	PSB1127327	STANDOFF-HEX MF M3-.5 X 6, M3-.5 PLASTIC
328	PSB1127328	BUTTON HD CAP SCR M3-.5 X 8
329	PSB1127329	STOP BUTTON YIJIA LA36M-40(1A1B)
330	PSB1127330	START BUTTON YIAN KUANG YS-F1
332	PSB1127332	FLAT WASHER 8.1 X 13 X 0.5MM
333	PSB1127333	CAP SCREW M10-1.5 X 20
334	PSB1127334	HEX NUT M8-.75
335	PSB1127335	P4 CORD 24G 4W 12"
337	PSB1127337	P2 CORD 24G 2W 12"
338	PSB1127338	FLAT WASHER 10MM
339	PSB1127339	CONTROL DRIVER CIRCUIT BOARD
340	PSB1127340	RUBBER BUMPER
341	PSB1127341	PHLP HD SCR M3-.5 X 6
342	PSB1127342	STANDOFF-HEX MF M3-.5 X 6, M3-.5
343	PSB1127343	FIXED HANDLE 38 X 115, M8-1.25 X 45
344	PSB1127344	PHLP HD SCR M3-.5 X 6
345	PSB1127345	FENDER WASHER 8MM
346	PSB1127346	FENCE
347	PSB1127347	HEX BOLT 1/4-20 X 1
348	PSB1127348	MITER GAUGE
349	PSB1127349	ADJUSTABLE HANDLE 1/4-20, 2L
350	PSB1127350	HINGE PIN
351	PSB1127351	PHLP HD SCR M5-.8 X 8
352	PSB1127352	FLAT WASHER 5MM
353	PSB1127353	INDICATOR
354	PSB1127354	INDEX PIN

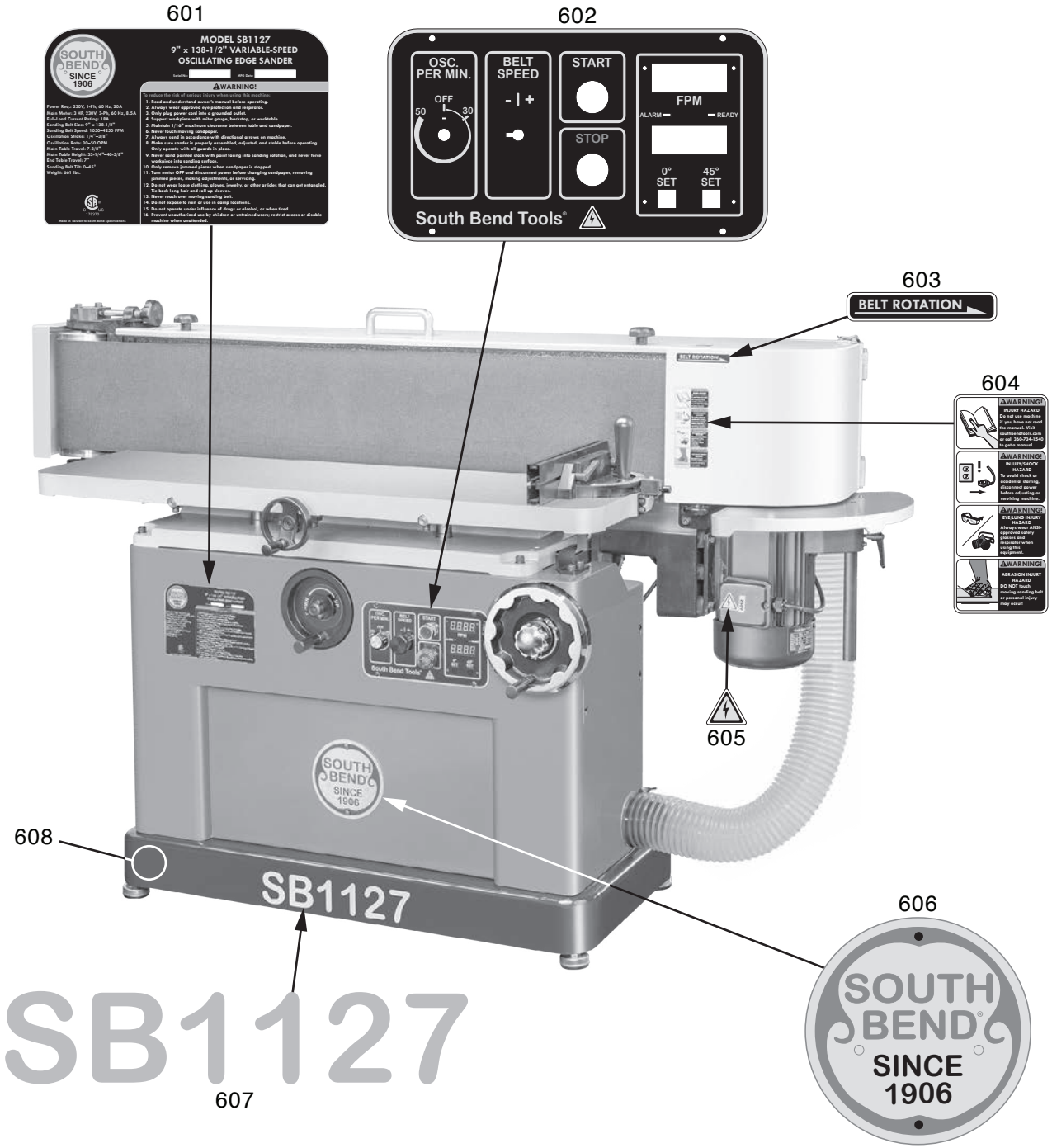
REF	PART #	DESCRIPTION
355	PSB1127355	COMPRESSION SPRING 0.8 X 7.8 X 10.5
356	PSB1127356	ADJUST BLOCK
357	PSB1127357	SET SCREW M4-.7 X 4
358	PSB1127358	GEAR KNOB
359	PSB1127359	PHLP HD SCR M5-.8 X 16
360	PSB1127360	ANGLE SCALE
361	PSB1127361	RIVET 2 X 5MM NAMEPLATE, STEEL
362	PSB1127362	INDICATOR MOUNTING BRACKET
363	PSB1127363	CAP SCREW M5-.8 X 8
364	PSB1127364	FLAT WASHER 6MM
365	PSB1127365	LOCK WASHER 10MM
372	PSB1127372	BUTTON HD CAP SCR M6-1 X 10
373	PSB1127373	CAP SCREW M10-1.5 X 25
379	PSB1127379	CAP SCREW M10-1.5 X 35
396	PSB1127396	TABLE HEIGHT COLUMN
397	PSB1127397	OIL SEAL
398	PSB1127398	CAP SCREW M10-1.5 X 45
399	PSB1127399	TILT SHAFT
400	PSB1127400	CAP SCREW M10-1.5 X 40
401	PSB1127401	BASE
402	PSB1127402	45 DEG STOP PLATE
403	PSB1127403	TABLE CLEARANCE BLOCK
404	PSB1127404	CAP SCREW M10-1.5 X 25
405	PSB1127405	TABLE CLEARANCE COLUMN
406	PSB1127406	CAP SCREW M8-1.25 X 35
408	PSB1127408	HANDWHEEL TYPE-17 100D X 10B-S
409	PSB1127409	TABLE CLEARANCE LEADSCREW
410	PSB1127410	LEADSCREW BRACKET
411	PSB1127411	CAP SCREW M8-1.25 X 25
412	PSB1127412	MAIN TABLE
415	PSB1127415	HEX BOLT M8-1.25 X 25
416	PSB1127416	HEX NUT M8-1.25
430	PSB1127430	LOCK NUT M10-1.25
432	PSB1127432	BEVEL GEAR 26T
433	PSB1127433	LEADSCREW BRACKET
434	PSB1127434	LOCK COLLAR
435	PSB1127435	HANDWHEEL SHAFT
436	PSB1127436	KEY 4 X 4 X 12
437	PSB1127437	KEY 4 X 4 X 8
438	PSB1127438	LEADSCREW NUT
439	PSB1127439	HEIGHT LIMIT PLATE
440	PSB1127440	BEVEL GEAR 26T
441	PSB1127441	CAP SCREW M6-1 X 16
442	PSB1127442	TABLE HEIGHT LEADSCREW
443	PSB1127443	FLAT WASHER 10MM
444	PSB1127444	FENDER WASHER 8MM
446	PSB1127446	THRUST BEARING 51102
451	PSB1127451	BUTTON HD CAP SCR M5-.8 X 8
454	PSB1127454	FOLDING HANDLE 23 X 85.5, M6-1
455	PSB1127455	KNOB BOLT M8-1.25 X 18, 3-LOBE, D42
456	PSB1127456	HANDWHEEL TYPE-18 150D X 12.7B-K
457	PSB1127457	FLAT HD CAP SCR M6-1 X 16

Cabinet Parts List (Cont.)

REF	PART #	DESCRIPTION
458	PSB1127458	BUTTON HD CAP SCR M6-1 X 10
459	PSB1127459	HANDWHEEL BRACKET
460	PSB1127460	STRAIN RELIEF TYPE-5 25.4MM
461	PSB1127461	CABINET
462	PSB1127462	STRAIN RELIEF TYPE-1 1/2"
463	PSB1127463	STRAIN RELIEF TYPE-1 1/2"
464	PSB1127464	CABINET DOOR
465	PSB1127465	90 DEG STOP PLATE
466	PSB1127466	DOOR LATCH
467	PSB1127467	STRAIN RELIEF TYPE-1 11/16"
468	PSB1127468	PHLP HD SCR M6-1 X 10
469	PSB1127469	CORD PLATE
470	PSB1127470	STRAIN RELIEF TYPE-1 11/16"
471	PSB1127471	SIDE PANEL
472	PSB1127472	CABINET BASE
478	PSB1127478	ELECTRICAL BOX
483	PSB1127483	ADJUSTABLE FOOT M12-1.75 X 53
484	PSB1127484	KNOB BOLT M10-1.5 X 19, 8-LOBE, D60
486	PSB1127486	HANDWHEEL TYPE-31 200D X 19.1B-K
487	PSB1127487	SET SCREW M6-1 X 12
488	PSB1127488	BUTTON HD CAP SCR M6-1 X 12
489	PSB1127489	EXT RETAINING RING 20MM
490	PSB1127490	FLAT WASHER 21 X 37 X 1MM
491	PSB1127491	WAVY WASHER 26.8MM

REF	PART #	DESCRIPTION
492	PSB1127492	MAGNETIC SENSOR RING
493	PSB1127493	LOCK COLLAR
494	PSB1127494	SET SCREW M8-1.25 X 10
495	PSB1127495	FLAT WASHER 19.1 X 25.4 X 1.6MM
496	PSB1127496	KEY 5 X 5 X 18
497	PSB1127497	WOODRUFF KEY 5 X 22MM
498	PSB1127498	TILT SHAFT
499	PSB1127499	PLATEN TILT BRACKET
500	PSB1127500	ROLL PIN 5 X 30
501	PSB1127501	WORM GEAR
502	PSB1127502	TILT SENSOR CIRCUIT BOARD
503	PSB1127503	SENSOR MOUNTING BRACKET
504	PSB1127504	BUTTON HD CAP SCR M4-.7 X 8
505	PSB1127505	EXT TOOTH WASHER 4MM
508	PSB1127508	HEX NUT M6-1
516	PSB1127516	HEX BOLT M8-1.25 X 16
517	PSB1127517	KEY 5 X 5 X 16
518	PSB1127518	SET SCREW 5/16-18 X 5/16
519	PSB1127519	SET SCREW M5-.8 X 5
520	PSB1127520	WAVY WASHER 20.9MM
521	PSB1127521	CAP SCREW M6-1 X 8
522	PSB1127522	CAP SCREW M10-1.5 X 30
528	PSB1127528	CAP SCREW M8-1.25 X 30
529	PSB1127529	SET SCREW M6-1 X 6

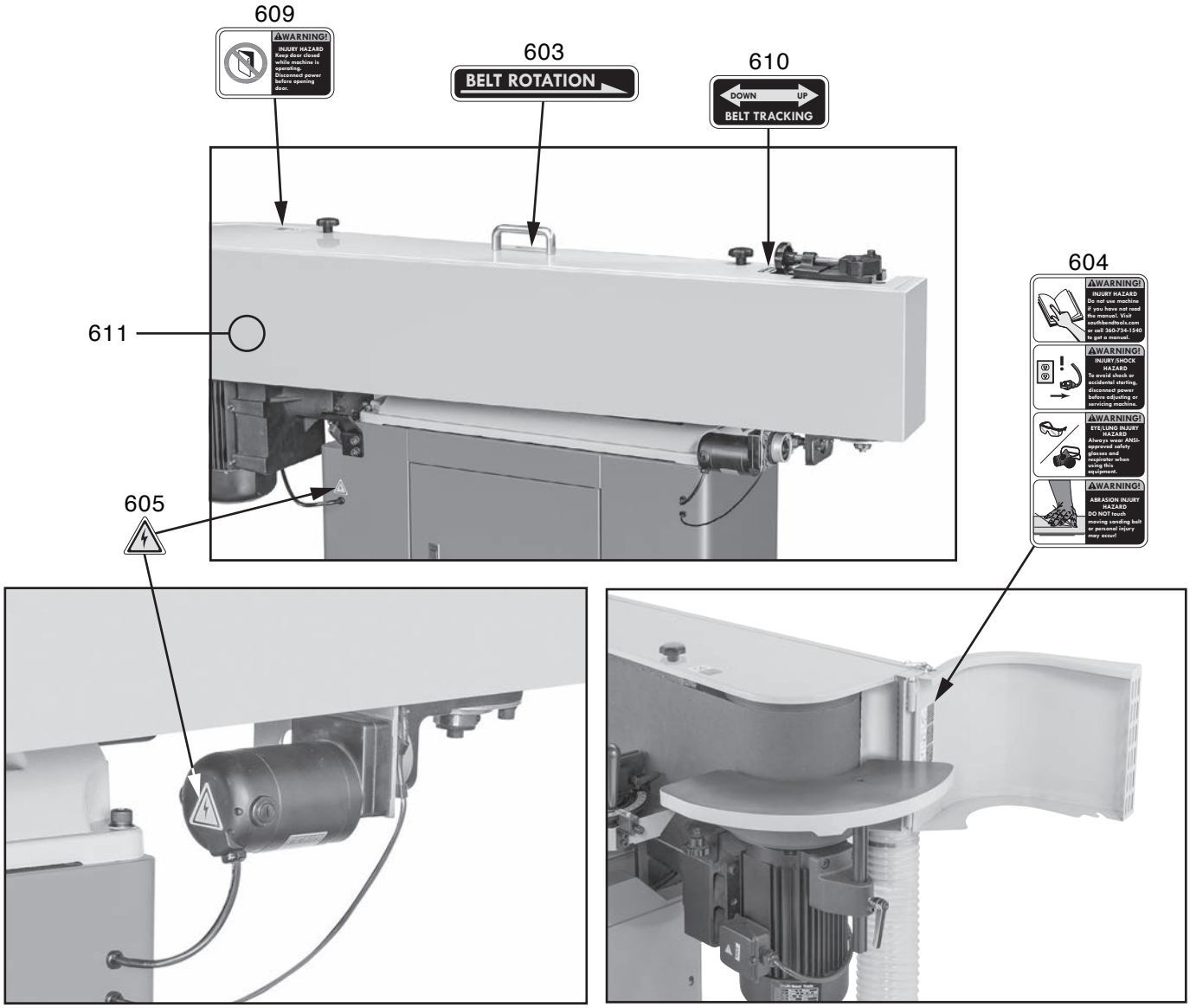
Machine Labels



REF	PART #	DESCRIPTION
601	PSB1127601	MACHINE ID LABEL
602	PSB1127602	CONTROL PANEL LABEL
603	PSB1127603	BELT ROTATION LABEL
604	PSB1127604	COMBO WARNING LABEL

REF	PART #	DESCRIPTION
605	PSB1127605	ELECTRICITY LABEL
606	PSB1127606	SOUTH BEND NAMEPLATE 152MM
607	PSB1127607	MODEL NUMBER LABEL
608	PSB1127608	TOUCH-UP PAINT, SB DARK BLUE

Machine Labels (Cont.)



REF	PART #	DESCRIPTION
603	PSB1127603	BELT ROTATION LABEL
604	PSB1127604	COMBO WARNING LABEL
605	PSB1127605	ELECTRICITY LABEL

REF	PART #	DESCRIPTION
609	PSB1127609	KEEP DOOR CLOSED LABEL
610	PSB1127610	BELT TRACKING LABEL
611	PSB1127611	TOUCH-UP PAINT, SB GRAY

⚠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 to order new labels.

Warranty

This quality product is warranted by South Bend Tools to the original buyer for **2 years** 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.

Thank you for your business and continued support.

For further information about this warranty, visit **https://www.grizzly.com/forms/warranty**, or scan the QR code below to be automatically directed to our warranty page.

WARRANTY

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