

# MODEL W1751 25" WIDE-BELT SANDER



# **OWNER'S MANUAL**

Phone: 360-734-3482 · On-Line Technical Support: tech-support@shopfox.biz

**COPYRIGHT © NOVEMBER 2006 BY WOODSTOCK INTERNATIONAL, INC.** WARNING: NO PORTION OF THIS MANUAL MAY BE REPRODUCED IN ANY SHAPE OR FORM WITHOUT THE WRITTEN APPROVAL OF WOODSTOCK INTERNATIONAL, INC.

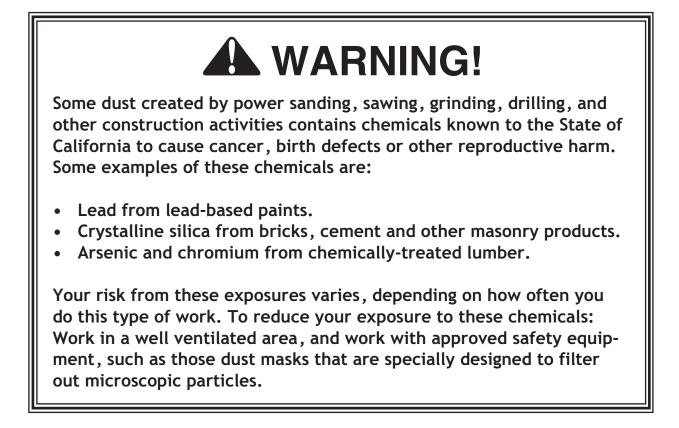
# **WARNING!**

This manual provides critical safety instructions on the proper setup, operation, maintenance and service of this machine/equipment.

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

The owner of this machine/equipment 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, blade/cutter 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.



#### Contents

NITRODUCTION	2
Woodstock Technical Support	
Specifications	
Controls and Features	5
Standard Safety Instructions	6
Additional Safety Instructions for Sanders	8
ELECTRICAL	
220V Operation	
Extension Cords	
Grounding	
SET UP	ó
Unpacking	0
Box Contents	
Machine Placement	
	1
Cleaning Machine	-
OPERATIONS	/
Control Panel	/
Test Run1	
General Operation1	
Using the Amp Draw Meter1	
Setting Feed Speed1	
Changing Sanding Belts2	
Emergency Stop	0
Using the Platen	1
Basic Sanding	1
Jet Air Flow	3
Belt Tracking2	4
Belt Oscillation Speed	
MAINTENANCE	
General	
Lubrication	
Cleaning Belts	
Maintaining Air System	
Maintaining All Systelli	U

SAFETY

#### USE THE QUICK GUIDE PAGE LABELS TO SEARCH OUT INFORMATION FAST!

Continued on next page



INTRODUCTION

SAFETY

ELECTRICAL

SET UP

#### Contents

SERVICE	27
Brake Service	27
Changing V-Belts	
V-Belt Tension	29
Conveyor Belt Tension and Tracking	
Pressure Rollers	
Belt Tracking Limit Switch	32
Troubleshooting	
Electrical Box Component Locations	35
W1751 Control Panel Component Connections	
W1751 Limit Switch Wiring Diagram	
W1751 General Wiring Diagram	
PARTS	
Lower Cabinet and Sanding Motor	40
Parts List	41
Conveyor System	
Parts List	
Upper Roller System	44
Parts List	
Platen and Sanding Drum System	
Parts List	
Upper Cabinet and Control Panel	
Parts List	
Air System	
Parts List	
Electrical Connections Box	
Parts List	
Accessories List	
Safety Label Placement	
Labels List	
Warranty	
Warranty Registration	55



USE THE QUICK GUIDE PAGE LABELS TO SEARCH OUT INFORMATION FAST!



### INTRODUCTION Woodstock Technical Support

Your new Shop Fox<sup>®</sup> 25" Wide-Belt Sander has been specially designed to provide many years of troublefree service. Close attention to detail, ruggedly built parts and a rigid quality control program assure safe and reliable operation.

Woodstock International, Inc. is committed to customer satisfaction. Our intent with this manual is to include the basic information for safety, setup, operation, maintenance, and service of this product.

We stand behind our machines! In the event that questions arise about your machine, please contact Woodstock International Technical Support at (360) 734-3482 or send e-mail to: <u>tech-support@shopfox.</u> <u>biz</u>. Our knowledgeable staff will help you troubleshoot problems and process warranty claims.

If you need the latest edition of this manual, you can download it from <u>http://www.shopfox.biz</u>. If you have comments about this manual, please contact us at:

Woodstock International, Inc. Attn: Technical Documentation Manager P.O. Box 2309 Bellingham, WA 98227



#### **Specifications**

Sanding Motor	P, 220V, Single-Phase, 1.8A, 1725 RPM, 60 Hz 
Maximum Board Thickness Minimum Board Thickness	
Minimum Board Length	
Dust Ports (Two)	
Power Control	
Machine Control	
Sanding Load Indication	Digital Amp Draw Meter
Light Sanding Control	Micro-Adjustable Graphite/Felt Platen System
Safety Control	
Net Weight	1060 Lbs

#### **Controls and Features**

- A В J С 6 Κ H D L **Rear View** G Е W1751 F
  - A. Two 5" Dust Ports
  - B. Control Panel
  - C. Anti-Slip Conveyor Belt
  - D. Emergency Stop Push Panel
  - E. Air Regulator/Water Separator
  - F. Floor Mounting Location

- G. Table Height Lock
- H. Table Height Handwheel
- I. Table Height Scale
- J. Digital Amp Load Meter
- K. Conveyor Motor
- L. Main Electrical Box





### **SAFETY FIRST!**

#### READ MANUAL BEFORE OPERATING MACHINE. FAILURE TO FOLLOW INSTRUCTIONS BELOW WILL RESULT IN PERSONAL INJURY.



Indicates an imminently hazardous situation which, if not avoided, WILL result in death or serious injury.

Indicates a potentially hazardous situation which, if not avoided, COULD result in death or serious injury.

Indicates a potentially hazardous situation which, if not avoided, MAY result in minor or moderate injury, MAY result in property damage.



This symbol is used to alert the user to useful information about proper operation of the equipment.

### Standard Safety Instructions

- 1. Thoroughly read the instruction manual before operating your machine. Learn the applications, limitations and potential hazards of this machine. Keep manual in a safe, convenient place for future reference. Make sure any other operators have read and understand the manual as well.
- 2. Keep work area clean and well lighted. Clutter and inadequate lighting invite potential hazards.
- **3. Ground all tools.** If a machine is equipped with a three-prong plug, it must be plugged into a three-hole grounded electrical outlet or grounded extension cord. If using an adapter to aid in accommodating a two-hole receptacle, ground using a screw to a known ground.
- 4. Wear eye protection at all times. Use safety glasses with side shields or safety goggles that meet the national safety standards, while operating this machine.
- 5. Avoid dangerous environments. Do not operate this machine in wet or open flame environments. Airborne dust particles could cause an explosion and severe fire hazard.
- 6. Ensure all guards are securely in place and in working condition.
- 7. Make sure switch is in the "OFF" position before connecting power to machine.
- 8. Keep work area clean, free of clutter, grease, etc.
- 9. Keep children and visitors away. Visitors should be kept at a safe distance away while operating unit.
- 10. Childproof workshop with padlocks, master switches or by removing starter keys.
- 11. Disconnect machine when cleaning, adjusting or servicing.

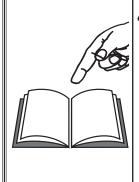


- 12. Do not force the machine. The machine will do a safer and better job if it does the work.
- **13. Use the correct tool.** Do not force the tool or attachment to do a job for which it was not designed.
- **14. Wear proper apparel.** Do not wear loose clothing, gloves, jewelry, keep long hair tied up, etc.
- **15. Remove adjusting keys and wrenches.** Before turning the machine on, make a habit of checking that all adjusting keys and wrenches have been removed before turning the machine *ON*.
- **16. DO NOT use extension cord.** Due to the high-amperage draw of this industrial machine, we do not recommend using an extension cord. If you use an extension cord with an undersized gauge or one that is too long, excessive heat will be generated within the circuit increasing the chance of a fire or damage to the circuit.
- 17. Keep stable footing and balance at all times.
- **18. Do not leave machine unattended.** Wait until it comes to a complete stop before leaving the area.
- **19. Perform machine maintenance and care.** Follow lubrication and accessory attachment instructions in the manual.
- **20. Keep machine away from open flame.** Operating machines near pilot lights and/or open flames creates a high risk if dust is dispersed in the area. Dust particles and an ignition source may cause an explosion. Do not operate the machine in high-risk areas, including but not limited to, those mentioned above.
- **21. If at any time you are experiencing** difficulties performing the intended operation, stop using the machine! Then contact our Service Department or ask a qualified expert how the operation should be performed.
- 22. Habits—good and bad—are hard to break. Develop good habits in your shop and safety will become second-nature to you.





#### **Additional Safety Instructions for Sanders**



**AWARNING** READ and understand this entire instruction manual before using this machine. Serious personal injury may occur if safety and operational information is not understood and followed. DO NOT risk your safety by not reading!

### 

USE this and other machinery with caution and respect, and always consider safety first, as it applies to your individual working conditions. Remember, no list of safety guidelines can be complete, and every shop environment is different. Failure to follow guidelines can result in serious personal injury, damage to equipment and/or poor work results.

- 1. **PROTECTING YOUR LUNGS.** Sanding operations create large amounts of fine dust. Some types of dust may cause allergic reactions or respiratory problems. In addition to wearing a respirator, always use a dust collector and overhead air filter for maximum protection.
- 2. AVOIDING ENTANGLEMENT. Do not allow your fingers to get pinched between the board and the conveyor belt during feeding. The grip of the conveyor belt may pull the operator's hand into the machine and cause serious injury or death. Similarly, do not place hands near the sanding belts during operation.
- 3. AVOIDING SANDING HAZARDS. Know the limits of the sander. Do not sand stock thinner than 1/8" or shorter than 12".
- 4. AVOIDING ENTANGLEMENT. Never perform sanding operations with the access doors open.
- 5. AVOIDING PROJECTILES. Always inspect stock for staples, nails, dirt or other foreign objects before sanding. These items may cause damage to your sander or may even be thrown at you at a high rate of speed from the sander.
- 6. STANDING BEHIND MACHINE. Never allow anyone to stand directly in front or behind the path of the stock as it is being fed through the sander. The stock may be ejected at a high rate of speed and could cause serious injury to the operator or bystanders.
- 7. SANDING CORRECTLY. Seek proper training/supervision before operating this sander. Do not force stock into the sander during operation or overload the sanding drums beyond reasonable limits. Also, only sand natural wood fiber through your sander. Other materials may damage your machine and open the possibility for operator injury. Keep the internal components clean and lubricated to ensure that the sander can perform the way it was intended.
- 8. USING DUST COLLECTION SYSTEMS. Never operate the sander without a working dust collection system. The sander is designed to properly do its job only when wood dust is being evacuated. The buildup of too much wood dust in the internal components will cause performance problems and may increase the likelihood of operator injury.
- **9. AVOIDING ENTANGLEMENT.** Loose clothing or long hair creates the potential for operator injury because they can easily be caught in the moving parts of the machine. Roll up loose sleeves, tie back long hair and take any other necessary steps to reduce this hazard.



### ELECTRICAL 220V Operation

The Shop Fox Model W1751 has a 7.5 HP, 32A, 220V single-phase sanding motor, and a  $^{1}/_{4}$  HP, 1.8A, 220V feed motor. Hardwire your machine to a power panel (**Figure 1**) that is rated for at least 50 amps.

We recommend connecting this machine to a dedicated circuit with a verified ground, using the circuit breaker size given below. Never replace a circuit breaker with one of higher amperage without consulting a qualified electrician to ensure compliance with wiring codes.

If you are unsure about the wiring codes in your area or you plan to connect your machine to a shared circuit, you may create a fire hazard—consult a qualified electrician to reduce this risk.

### **Extension Cords**

We do not recommend using an extension cord for 220V operation. When it is necessary to use an extension cord, use the following guidelines:

- Use cords rated for Standard Service
- Never exceed a length of 50 feet
- Ensure cord has a ground wire and pin
- Do not use cords in need of repair
- Use no smaller than 6 gauge cords

#### Grounding

This machine must be grounded! Verify that any existing electrical outlet and circuit you intend to plug into is actually grounded. If it is not, it will be necessary to run a separate copper grounding wire, of the appropriate size, from the outlet to a known ground. Under no circumstances should you connect your machine to an ungrounded power source or electrocution or severe shock could occur.



DO NOT attempt to work on your shop electrical system if you are unsure about electrical codes and wiring! Seek assistance from a qualified electrician. Ignoring this warning can cause electrocution!



TURN OFF and LOCK your master power switch so no power is available to the sander before connecting electrical wires! If you ignore this warning serious electrical shock may occur causing injury or death!

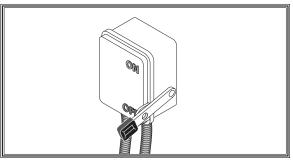


Figure 1.	Recommended	connection	type.
-----------	-------------	------------	-------

Operating Voltage	Amp Draw	Min. Circuit Size	Connection Type	Extension Cord
220V Operation	34 Amps	50A	Hardwire	Not
			w/Shutoff Switch	Recommended



#### SET UP Unpacking

Qty.

The Model W1751 has been carefully packaged for safe transporting. If you notice the machine has been damaged in shipment, contact your machine dealer and the shipping company immediately.

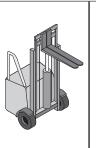
#### **Box Contents**

The following is a description of the components shipped with the Shop Fox W1751. Lay the components out, and use **Figure 2** and the list below to inventory your package. If any parts are missing, find the part number in the back of this manual and call Woodstock International, Inc. at 360-734-3482 or e-mail: tech-support@shopfox.biz.



#### 

HAZARD! Immediately discard all plastic bags and packing materials to eliminate choking/ suffocation hazards for children and animals.



### 

The Model W1751 weighs approximately 1060 lbs. Use power or hydraulic equipment to avoid serious personal injury or death.



Figure 2. Parts and tool inventory.

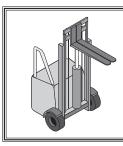
ltem

Wide Belt Sander1Sanding Belt 100 Grit1Sanding Belt 180 Grit1Platen Assembly1Crank Handle1
Tool Box1-Phillips Head Screwdriver #21-Open-End Wrench 8/10mm1-Open-End Wrench 12/14mm1-Open-End Wrench 11/13mm1-Open-End Wrench 11/13mm1-Open-End Wrench 17/19mm1-Special Wrench1-10 Pc-Metric Hex Wrench Set1-Door Lever Keys2-Platen Removal Tool1



#### **Machine Placement**

- Floor Load: Your sander weighs 1060 lbs and has a 39" X 29" footprint. Some floors may require additional bracing to support both machine and operator.
- Working Clearances: Consider existing and anticipated needs, size of material to be processed through the machine, and space for auxiliary stands, work tables or other machinery when establishing a location for your sander.
- Lighting: Lighting should be bright enough to eliminate shadow and prevent eye strain.
- Electrical: Electrical circuits must be dedicated or large enough to handle amperage requirements. Outlets must be located near each machine, so power or extension cords are clear of high-traffic areas. Follow local electrical codes for proper installation of new lighting, outlets, or circuits.



#### 

USE helpers or power lifting equipment to lift this wide belt sander. Otherwise, serious personal injury may occur.



ACAUTION MAKE your shop "child safe." Ensure that your workplace is inaccessible to youngsters by closing and locking all entrances when you are away. NEVER allow untrained visitors in your shop when assembling, adjusting or operating equipment.

#### **Cleaning Machine**

The upper sanding drum of your sander is coated with a waxy grease that protects it from corrosion during shipment. Clean this grease off with a solvent cleaner or citrus-based degreaser. DO NOT use chlorine-based solvents such as brake parts cleaner or acetone—if you happen to splash some onto a painted surface, you will ruin the finish.



**AVARNING** NEVER use gasoline or other petroleum-based solvents when cleaning. Most have low flash points, which make them extremely flammable. A risk of explosion and burning exists if these products are used. Serious personal injury may occur if this warning is ignored!



### 

ALWAYS work in wellventilated areas far from possible ignition sources when using solvents to clean machinery. Many solvents are toxic when inhaled or ingested. Use care when disposing of waste rags and towels to be sure they DO NOT create fire or environmental hazards.



#### Assembly

This assembly section covers how to install the platen, handwheel crank, air supply, ducting, and the sanding belt.



MAKE SURE THIS MACHINE IS DISCONNECTED FROM POWER BEFORE YOU DO THESE STEPS!

#### Platen

- 1. Facing the front of the sander, open the left hand access door with the included door handle.
- 2. Remove the door handle, and set it aside.
- 3. Turn the sanding head lock lever counterclockwise and remove the lever and the steel spacer block.
- 4. Install the platen (Figure 3) so that the graphite pad is on the left-hand side of the platen.
- 5. Reinstall the steel spacer block, the sanding head lock lever, and turn the lever clockwise to lock the headstock.
- 6. Lower the conveyor table down as far as it will go, so that you have enough room to work under the sanding belt rollers.
- **7.** Place a straightedge across the bottom of both sanding belt rollers.
- Using the platen adjustment knob shown in Figure
   position the platen so that it barely touches the straightedge, and thus, is even with both sanding belt rollers.

#### Handwheel Crank

- 1. Make sure that the jam nut is threaded completely onto the handle screw.
- 2. Use a flat-head screwdriver to thread the handle screw all the way into the handwheel as shown in Figure 5.
- 3. Un-thread the handle screw 1/2 a turn to make the plastic sleeve loose enough rotate freely.
- 4. Tighten the jam nut to lock the handle screw in place.

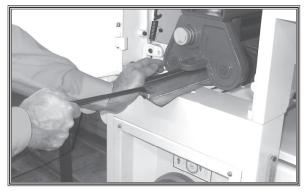


Figure 3. Installing/removing platen.

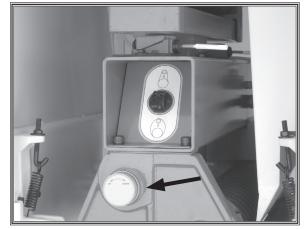


Figure 4. Platen adjustment knob.

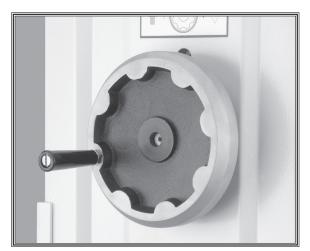


Figure 5. Table height handwheel.



#### Air Supply

1. Push the air supply hose onto the air pressure regulator inlet fitting, and clamp it in place with a hose clamp as shown in **Figure 6**.

**Note:** If you prefer, you can replace the included air nozzle with a 3/8" male quick connect air coupling.

2. When the air hose is installed, pull up and rotate the regulator air pressure knob until the gauge reads 75 PSI, then push the knob down to lock in place. DO NOT attempt to regulate the air pressure with the ON/OFF air supply lever. This lever is the ON/ OFF air pressure to the machine only.

#### NOTICE

To achieve maximum life of the air system o-rings and gaskets, keep the air pressure shut off when not using the sander, and DO NOT exceed 75 PSI.

#### Ducting

Install two 5" dust collection hoses to the top of the sander (**Figure 7**).

Before performing any sanding operations, attach the dust ports to a dust collector, which can draw at least 1250 CFM, or dust buildup will hinder the performance of your sander.

**Note:** Even with a sufficient dust collection system, a fine layer of dust may still be present on your stock as it comes out of the sander. This residual dust is a normal condition.



#### 

REMEMBER, this machine produces fine sawdust particles that can be inhaled, causing allergic reactions or respiratory problems. ALWAYS wear your respirator in addition to using an adequate dust collection system.

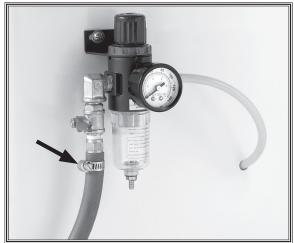


Figure 6. Air hose attached to regulator.



Figure 7. Dust collection hoses attached to dust ports.



#### Sanding Belt Installation

- 1. Before installing the belt, clean the protective grease from the upper metal sanding belt roller as per the **Cleaning Machine** instructions on **Page 11**.
- 2. DISCONNECT THE SANDER FROM POWER, but keep the air pressure applied into the machine.
- **3.** Turn the sanding head lock lever counterclockwise and remove the lever and the steel spacer block.
- 4. Locate the arrows on the inside of the sanding belt. These arrows show the direction that the sanding belt is designed to rotate during operation. Facing the inside of the left-hand access door, the sanding belt will rotate counterclockwise.
- 5. Install the sanding belt as shown in **Figure 8**, and center it on the rollers and in between the ceramic limit switch levers.
- 6. Reinstall the steel spacer block, the sanding head lock lever, and turn the lever clockwise to lock the headstock.

#### Sanding Belt Tensioning

When air is applied to the system (75 PSI), the switch shown in **Figure 9** automatically sets the belt to the correct tension. When the air pressure is connected and the switch is flipped up, the belt will automatically tighten to the correct tension. Flipping the switch down will immediately exhaust the air and release the belt tension.

You must tension the sanding belt before starting the sander, and de-tension the belt when sander is not in use, or you will stretch the belt.



**Figure 8.** Installing sanding belt over rollers. The arrows on the inside must point in the same direction as belt rotation.

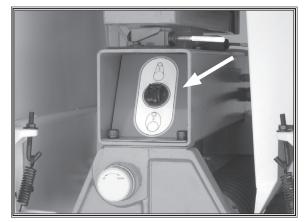


Figure 9. Belt tension knob.



#### Pressure Roller Depth and Alignment

To reduce snipe, double check the pressure roller depth adjustment. The front and rear pressure roller should be approximately 0.3-0.5mm below the level of the sanding drum.

#### To adjust the pressure rollers, do these steps:

- 1. DISCONNECT THE SANDER FROM POWER, but keep the air pressure coming in.
- 2. Make two gauge boards that are 24" long and are of a uniform thickness.
- 3. Tension the sanding belt.
- 4. Place each board on each side of the conveyor belt so that they are positioned directly below the front and back pressure rollers as shown in **Figure 10**.
- 5. With the adjustment bolts shown in Figure 10, raise the pressure rollers above the sanding belt roller position.

**Note:** The pressure roller adjustment bolts can be locked/unlocked with the recessed setscrews in the head of the bolt. For the rear pressure rollers, these bolts are located in the same position on the back side of the machine.

- 6. Make sure that the platen is even with the sanding belt rollers.
- 7. Raise the table up until the boards barely touch the sanding belt, and mark the table handwheel position with a piece of tape or chalk.
- 8. Turn the table handwheel counterclockwise  $1/8^{th}$  of a turn, this will lower the table approximately 0.4mm.
- **9.** Now lower the front and rear pressure rollers so that both ends barely touch the boards.

**Note:** The pressure rollers should now be properly set between 0.3-0.5mm below the sanding drum. Keep in mind that roller tension, besides roller depth, will also affect the feeding operations.



Figure 10. Pressure roller height adjustment locations and gauge boards installed.



#### Pressure Roller Tension

Pressure roller tension is the downward force that the pressure rollers place on the workpiece as it passes through the sander. Too little tension will cause the workpiece to pass unevenly through the sander and may launch the workpiece from the sander. Too much tension may cause poor and inconsistent sanding results, as well as premature wear on the conveyor belt and table.

#### To adjust the pressure rollers, do these steps:

- MAKE SURE THE MACHINE IS DISCONNECTED FROM POWER and that you have set the pressure roller height.
- 2. Open both upper access doors and locate the four tension springs shown in Figure 11.
- The position of the tension adjustment nut (Figure 11) controls the spring tension. Turn the nut clockwise to increase the tension and counterclockwise to decrease the tension.

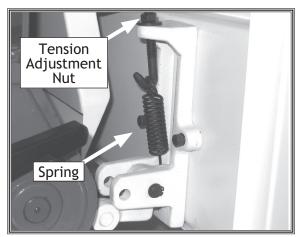


Figure 11. Pressure roller adjuster.



# **OPERATIONS**

#### **Control Panel**

Below is a summary of your sander control panel and the components that it controls. Use the list with **Figure 12** to become familiar with your sander.

- Sanding Load Amp Meter: Indicates the amp load on the sanding motor when a sanding operation is in progress. Never operate the sander in the red zone.
- Sanding Belt Start and Stop Buttons: Turns the sanding motor *ON* and *OFF* if the sander has air pressure and the belt is tensioned.

- **Power Lamp:** Indicates when machine has power to the control panel.
- Conveyor Belt Start and Stop Buttons: Cycles the conveyor motor *ON* and *OFF* for feeding wood into the sander.
- Emergency Stop Button: Stops all electrical power to motors in event of emergency, and stops sanding drums with an air-disc brake. If button was pushed, you must rotate the button so it pops back out, and then you can start the machine again.

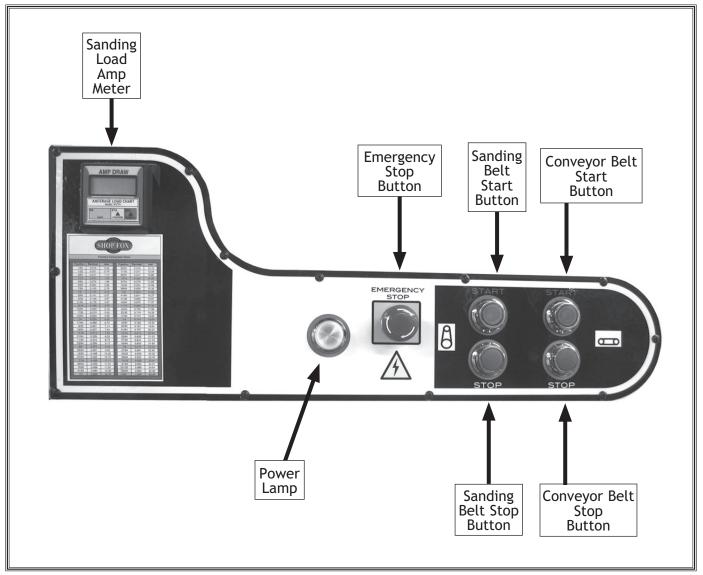


Figure 12. Control panel interface.



#### **General Operation**

Your sander will perform many types of operations that are beyond the scope of this manual. If performed incorrectly, sanding operations can be dangerous or deadly.

The instructions in this section are written with the understanding that the operator has the necessary knowledge and skills to operate this machine. If at any time you are experiencing difficulties performing any operation, or you are inexperienced with this machine, stop using the machine and consult your supervisor for help!

If you are an inexperienced operator, we strongly recommend that you read books, trade articles, or seek training from an experienced wide belt sander operator before performing any unfamiliar operations. Above all, your safety should come first!

#### Test Run

Once assembly is complete, the machine is ready for a test run. The purpose of a test run is to identify any unusual noises and vibrations, as well as to confirm that the machine emergency stop system is performing as intended.

To complete the test run, do these steps:

- 1. Tie back loose clothing and hair, and make sure all access doors and handles are secured.
- 2. Turn the sander and conveyor belt ON.
- **3.** Using the start and stop buttons on the control panel, cycle through sanding and conveyor functions.
- 4. Listen for any unusual noises. A slow, rhythmic air hiss is normal. The machine should run smoothly with little or no vibrations.
  - -If there are any unusual noises or vibrations, shut the machine **OFF** immediately, and disconnect if from power and air. Investigate the source of the noise or vibration. DO NOT make any adjustments to the machine while it is plugged in. Do not run the sander until you fix the problem.
- 5. Push the emergency stop panel to test the emergency stop system, and the sander should stop almost immediately.



REMEMBER, this machine produces fine sawdust particles that can be inhaled, causing allergic reactions or respiratory problems. ALWAYS wear your respirator regardless if you use a dust collection system. Dust collectors do not adequately protect your lungs.

### NOTICE

If you must use the emergency stop panel to stop the sander, you may hear the belts squeal, and smell a burnt rubber odor coming from the right side of the sander. The noise and smell is a normal result because the brake aggressively stops the sander. Only use the emergency push panel to stop the sander in an emergency situation. Do not use it for normal shutdown. If you do, you will wear out the belts, brake pads, caliper, and rotor very quickly.



#### **Setting Feed Speed**

The conveyor belt motor offers two conveyor speeds: 13 and 16 FPM (Feet per minute). Figure 13 points out the two sprocket ratios available.

To change the conveyor belt speed do these steps:

- 1. DISCONNECT THE SANDER FROM POWER!
- 2. Remove the conveyor belt motor cover by taking out the cap screw that secures it.
- **3.** Loosen the four bolts at the motor mount and slide the motor up. Pull the chain off of the sprocket that it is currently on.
- 4. Place the chain on the next sprocket and slide the motor down to tighten the chain.
- 5. Hold the motor down and tighten the motor mount bolts at the same time.
- 6. Replace the motor cover before reconnecting the sander to the power supply!

#### Using the Amp Draw Meter

The amp draw meter (Figure 14) is used to keep the machine from being overloaded during sanding operations.

As a general rule, always start with a shallow sanding depth and carefully increase the sanding depth. Keep the amp load in the green range during operation. Generally, the normal depth of cut is no more than 1/64" or 0.016" for a 25" wide board using coarse sandpaper. DO NOT work your machine in the red zone as shown on the Amperage Load Chart. If operated in the red zone, the motor will lose RPM, the start capacitor will energize, and capacitor or motor damage will occur.

Amp load is directly affected by many factors such as feed rate, depth of cut, wood type, sandpaper grit, and workpiece width.

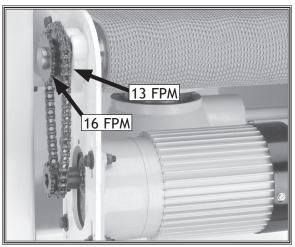


Figure 13. Conveyor sprocket ratios.

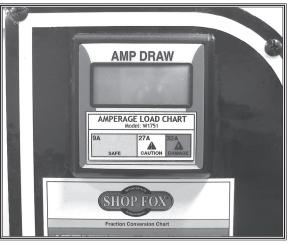


Figure 14. Amp draw meter.

NOTICE

DO NOT VOID MACHINE WARRANTY! Keep the amp load within the GREEN zone shown on the AMP LOAD CHART. If you operate the sander in the RED zone, capacitor or motor failure will occur and will not be covered under warranty.



#### **Changing Sanding Belts**

When selecting sanding belt grit, keep in mind that the Model W1751 accepts only 26" wide x 48" long sanding belts. Consider the type of work, the species of wood, and the quality of finish when selecting sandpaper. Use these grit numbers shown in **Figure 15** as a general guide to sandpaper type.

Sanding belts are often slightly different in shape and tracking properties will be different for each belt. **Refer** to the **Jet Airflow, Belt Tracking** and **Belt Oscillation** procedures starting on **Page 23** so you can learn how to quickly reset belt tracking and oscillation.

#### **Emergency Stop**

When pushed, the emergency stop panel shown in **Figure 16** stops the electricity to the motors and also applies an air-disc brake to stop the sander immediately.

#### To use the emergency stop, do these steps:

- 1. Push the bottom of the emergency stop panel.
- 2. Hold the emergency stop panel until the sander has come to a complete stop.

### 

KEEP the sanding drum drive belts correctly adjusted. Otherwise, the sanding drum pulley will slip when the emergency brake is applied and not immediately stop the machine in the event of an emergency!

### NOTICE

If you must use the emergency stop panel to stop the sander, you may hear the belts squeal, and smell a burnt rubber odor coming from the right side of the sander. The noise and smell is a normal result because the brake aggressively stops the sander. Only use the emergency push panel to stop the sander in an emergency situation. Do not use it for normal shutdown. If you do, you will wear out the belts, brake pads, caliper, and rotor very quickly. **Note:** For best results, do not increase grit numbers more than 50 on any successive pass.

- 60 Grit or less..... Coarse
- 80-100 Grit ..... Medium
- 120-150 Grit ..... Fine
- 220 or higher ..... Not Recommended Sandpaper will load up and burn.

Figure 15. General sandpaper types.



Figure 16. Emergency stop panel.

#### Using the Platen

The adjustable platen and dial (Figure 17) allows you to achieve different results from your sander. The three possible platen positions are as follows:

**Platen Up** – The platen is moved above the sanding rollers. The rollers then act like a drum sander and allow for increased stock removal. In this position, the ideal belt grit is #100 or coarser. The scratch pattern in this mode will be short and deep, relative to grit size.

**Platen Even** — The platen is set even with the sanding rollers. The rollers act together with the platen pressure to achieve intermediate or final finishing. In this position, the ideal belt grit is between #100 and #180. The scratch pattern in this position is moderate, relative to grit size.

**Platen Down** – The platen is moved below the sanding rollers. With the platen down, the workpiece contact with the sandpaper is only made at the platen. This position is used for fine finishing, sanding repairs, or sanding lacquer. The ideal belt grit is #180 or finer. Generally sanding with the platen down will remove 0.004" or less. The scratch pattern in this position will be long and shallow, relative to grit size.

#### **Basic Sanding**

The maximum depth of cut is 1/64" or 1/8<sup>th</sup> of a turn of the handwheel. Attempting to remove too much material can cause workpiece burning, premature paper wear, paper tearing, motor stall and capacitor burnout.

#### To sand a workpiece, do these steps:

- 1. Read this manual, and take all safety precautions outlined in it.
- Put on safety glasses and a respirator, and tie up out of-the-way long hair and loose sleeves or clothing.
- **3.** Start the dust collector.
- 4. Measure the thickness of your workpiece.
- 5. Rotate the table height handwheel until the sanding depth is slightly higher than your workpiece. This first pass takes off any high spots in your workpiece.
- 6. Turn on the sander, conveyor, and air supply.

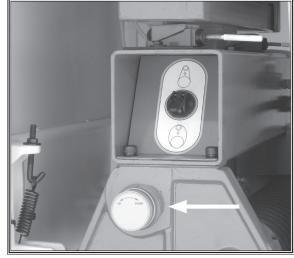


Figure 17. Platen control.

# **OPERATIONS**

#### Tip

For best results when finish sanding, feed each piece through the sander two or three times without adjusting the depth of cut. Turn the workpiece 180° and feed it through two or three more times at this same depth. As always, use your best judgement. If you no longer hear the sanding belt making contact with the workpiece on successive cuts, then no further passes are needed at that depth.





- 7. While standing out of the way of potential kick back, place the workpiece on the conveyor and allow the conveyor to pull the workpiece in.
- 8. Observe the amp load gauge.

 If the amps begin to climb to the red zone,
 IMMEDIATELY rotate the handwheel so the table is lowered and the sanding depth is reduced.

- 9. Receive the workpiece from the outfeed side of the conveyor, measure the workpiece, readjust the sanding depth, and make a second sanding path while watching the amp load gauge.
- 10. Repeat as required to get your sanding results.

**Note:** To get good sanding results you will almost always need to make two to three sanding passes.



#### Jet Air Flow

The air jet located at the air fork sends a stream of air across the air fork and into the air stream receiver (see **Figure 18**). As soon as the sanding belt obstructs this stream of air, a piston changes the direction of belt movement to the left. Your goal is to adjust this stream of air so the system uses the least amount of air and yet the machine still oscillates consistently and without delay.

To adjust the jet air flow, do these steps:

- 1. DISCONNECT THE SANDER FROM POWER.
- 2. Adjust the air regulator to 75 PSI.
- 3. Open both upper access doors on the sander, loosen the sanding belt tension, and slide the belt so the air stream is unobstructed.
- 4. Loosen the jam nut and turn the jet adjustment knob (Figure 19) clockwise until the air stream is reduced to a minimum.
- 5. Turn the jet adjustment knob counterclockwise, and use a piece of cardboard to alternately block and unblock the air stream until the upper drum just begins to react and move left and right.
- 6. Turn the jet adjustment knob counterclockwise an additional 1/2 turn and tighten the jam nut.
- 7. Now do the **Belt Tracking** procedure on **Page 24**.

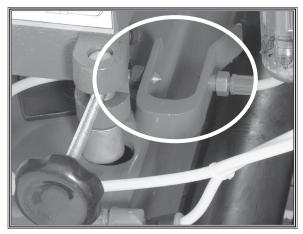


Figure 18. Air jet and air fork assembly.

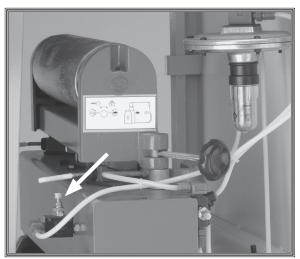


Figure 19. Jet adjustment knob.



### Belt Tracking

The belt tracking knob and lever (**Figure 20**) stops the belt from tracking off of the drums and shutting down the machine. Your goal is to position the belt tracking lever so the belt tracks in the center of the drums and the left-and-right belt movement takes a similar amount of time.



KEEP your hands clear of the sanding belt when making these adjustments!

To set the belt tracking, do these steps:

**Note:** Since each adjustment effects the other two slightly, you may have to repeat or fine-tune the **Belt Oscillation Speed** and the **Jet Air Flow** adjustments after you do this procedure.

- 1. Complete the Jet Air Flow adjustment on Page 23.
- 2. Put on safety glasses, tie back all loose clothing, remove jewelry, pull back sleeves, and tie back long hair so it will not get caught by the sanding belt.
- 3. Turn the sander ON.
- 4. Observe the left-to-right motion of the belt as it moves along the drum while looking from the front of the sander.
  - -If the belt tracks faster to one direction than the other, loosen the belt tracking knob and slightly move the lever and retighten the knob. Through a process of trial-and-error you will be able to adjust this lever so the belt tracks at a similar rate from right-to-left and left-to-right. This tracking will occur between the ceramic limit switch levers.
- 5. Keep the sander running, and now complete the **Belt Oscillation Speed** adjustment as outlined on **Page 25**.



Figure 20. Belt tracking knob and lever.



#### **Belt Oscillation Speed**

For normal operations, the oscillation speed should be set so that it takes approximately a second or two to complete each direction of travel; however, you can experiment with different speeds to see how the results may affect your finished product. Often, you may find that certain speeds yield better results for different varieties of stock and the feed rates chosen.



KEEP your hands clear of the sanding belt when making these adjustments!

To set the belt oscillation speed, do these steps:

**Note:** Since each adjustment effects the other two slightly, you may have to repeat or fine-tune the **Belt Tracking** and the **Jet Air Flow** adjustments after you do this procedure.

- 1. Complete the Belt Tracking adjustments on Page 24.
- 2. Put on safety glasses, tie back all loose clothing, remove jewelry, pull back sleeves, and tie back long hair so it will not get caught by the sanding belt.
- 3. If you have not already done so, turn the sander **ON**.
- 4. Looking from the front of the sander, observe the left-to-right motion of the belt as it moves along the drum.
  - -If the oscillation is very sluggish (streaks are appearing on the workpiece), or the oscillation is very fast (less than a second), loosen the jam nut on the air valve and adjust the knob to restrict or apply more air to adjust the oscillation speed.
- 5. When you get the speed between 1-2 seconds, tighten the jam nut.
- 6. Observe belt tracking and oscillation, and repeat the Belt Tracking procedure on Page 24 or the Jet Air Flow procedure on Page 23 if needed.



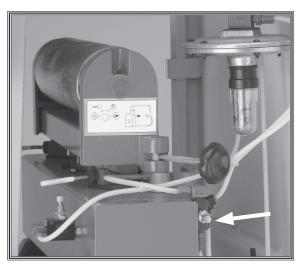


Figure 21. Oscillation speed knob.



### MAINTENANCE



#### 

TURN OFF and LOCK the master power switch when doing maintenance so no power is available to the sander! If you ignore this warning serious electrical shock or accidental start may cause injury or death!

#### General

Regular maintenance on your Model W1751 ensures optimum performance. Inspect your machine each time you use it. At the end of the day, remove the sanding belt and clean the back-side of the sanding belt and the drum surfaces. Remove wood and abrasive dusts from the inside of the machine.

### Lubrication

Wipe off and lubricate the rack with general purpose automotive grease often, and wipe a thin layer of motor or machine oil on the table column (see **Figure 22**). When lubricating machine parts, your goal is to achieve adequate lubrication to prevent rust, and a thin layer of lubricant to prevent metal-to-metal friction. Too much lubrication will attract dirt and sawdust, causing machine parts to bind.

#### **Cleaning Belts**

To increase the working life of your sanding belts, clean them whenever they decrease in performance due to heavy loading. Use a **Pro-Stik® Cleaning Pad** shown in **Figure 23**. To clean the belts, simply set your table to the thickness of the cleaning pad, and run the pad through the sander two or three times. **DO NOT take too deep of a cut—the belt should barely touch the cleaning pad**!

### Maintaining Air System

Empty the diaphragm dust bowl and air regulator moisture bowl when they become half full, and make sure that the regulator is maintaining the system air pressure to 75 PSI (see **Figure 24**).

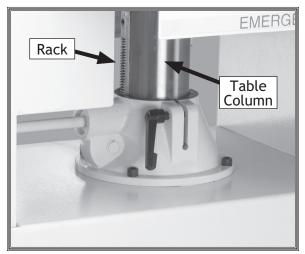


Figure 22. Table column lubrication locations.



Figure 23. Pro-Stik® Cleaning Pad.

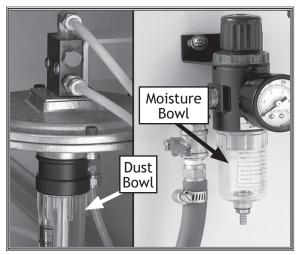


Figure 24. Diaphragm dust bowl and air regulator moisture bowl.



# SERVICE

#### Brake Service

Check the brake rotor (shown in **Figure 25**) regularly to make sure it is clean and the pads are still in good condition (see **Figure 26**). Using the emergency stop system for daily machine shutdown will wear out the sanding belts and the brake pads. Inspect for any grease or oil on the brake rotor as oil reduces emergency braking ability. To clean any lubricants from the rotor, only use automotive brake parts cleaner and a dry rag. Replace brake pads if they are contaminated with oil or if you suspect they are failing. DO NOT re-use oily brake pads!

To check the condition of the brake pads, do these steps:

- 1. DISCONNECT THE SANDER FROM POWER, AND SHUT OFF AND RELIEVE THE AIR PRESSURE!
- 2. Remove the lower-right motor-access panel.
- 3. Measure the thickness of each pad, if a pad is below 1/8" (Figure 25), then replace both brake pads.

To replace the brake pads, do these steps:

- 1. DISCONNECT THE SANDER FROM POWER, AND SHUT OFF AND RELIEVE THE AIR PRESSURE!
- Use a 14mm wrench and remove the two caliper anchor pin retaining nuts and washer (see Figure 25).
- 3. Use locking pliers to clamp on the anchor pin end and pull the pin from the caliper mount, and remove the springs and caliper (see Figure 26).
- 4. If the rotor is damaged, remove the rotor and have it surfaced at a machine shop. Clean the rotor with automotive brake parts cleaner and handle it with a dry rag when installing.
- 5. To finish the job, install the new brake pads, reassemble and mount the caliper, and reconnect the air line if removed.
- 6. Test the emergency brake operation!

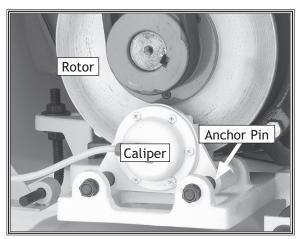


Figure 25. Brake assembly.

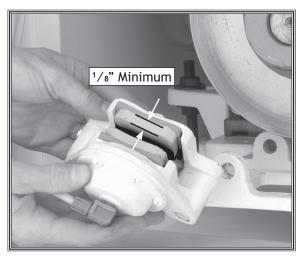


Figure 26. Brake caliper removed for access to brake pads.



#### **Changing V-Belts**

Check the V-belts periodically to check for signs of glazing, cracking or fraying. If any of these conditions are present, change both V-belts. In order to take the V-belts off of the roller pulleys, the rollers must be removed from the sander.

#### Change the V-belt as follows:

- 1. DISCONNECT THE SANDER FROM POWER AND AIR PRESSURE!
- 2. Loosen the V-belts and remove them from the motor pulley. Refer to V-Belt Tension for any needed details on Page 29.
- 3. Open both access doors on the upper part of the machine. At the left-hand access side, remove the platen knob by loosening the setscrew near its dial.
- 4. Remove the two setscrews that secure the dial plate to the casting and then remove the two large cap screws that secure the top of the casting.
- 5. Pull the casting off of the roller ends as shown in Figure 27.
- 6. At the other side of the machine (the right-hand side from the front), remove the large nut shown in Figure 28. The roller may turn if not held from the other side. This secures the other end of the front roller shaft to the sander body.
- 7. Now, move back to the left-hand side of the machine and carefully pull out the front sanding belt roller as shown in Figure 29. The V-belts can now be easily removed.
- 8. Install the new V-belts in the reverse order of removal. To make this process easier, have a helper hold the V-belts up at the other side of the sander when you re-install the roller. When you retighten the large roller shaft nut, have your helper stand at the other side of the sander to keep the roller from turning.

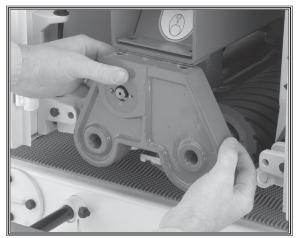


Figure 27. Roller casting end.

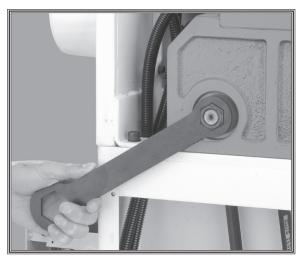


Figure 28. Roller spindle nut.

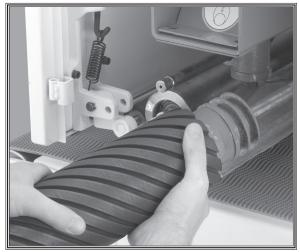


Figure 29. Roller removal.



#### **V-Belt Tension**

### 

KEEP the sanding drum drive belts correctly adjusted. If the belts are loose, and the emergency stop is engaged, the sanding drum pulley will slip and not immediately stop in the event of an emergency!

The V-belts that drive the sanding rollers must be tensioned properly for best performance.

To tension the V-belts, do these steps:

- 1. DISCONNECT THE SANDER FROM POWER!
- 2. Remove the cover on the right-hand side of the lower portion of the sander.
- 3. The two nuts shown in Figure 30 are responsible for adjusting the V-belt tension. Turn both nuts clockwise to tighten the V-belts, or turn both nuts counterclockwise to loosen the V-belts.
- 4. The V-belt is properly tightened when it will move no more than <sup>3</sup>/<sub>4</sub>" in the center with moderate pressure from your thumb.

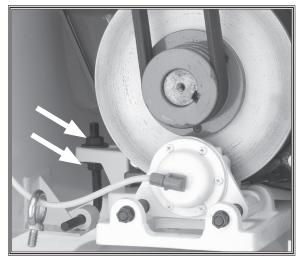


Figure 30. Sanding motor V-belt adjustment.



#### Conveyor Belt Tension and Tracking

The conveyor belt tension and tracking has been set at the factory. However, adjust the conveyor belt tension and tracking if you notice that your conveyor belt is slipping or is tracking off center, or loading up against the positioning wheels (**Figure 32**) under the conveyor table.

#### To adjust the conveyor belt tension and tracking, do these steps:

- 1. Lift the emergency stop push panel so it contacts the safety stop shown in Figure 31. The safety stop prevents the top edge of the push panel from tearing the conveyor belt when you lift the push panel during conveyor tracking adjustments.
- 2. From side-to-side, turn the conveyor belt tension and tracking screws equal amounts so the belt tension is snug and will not slip on the rollers when sanding at a maximum load.
- 3. Start the conveyor.
- 4. Turn the conveyor belt tension and tracking screws again as required to position the conveyor belt roller evenly on each side. See Figure 32.
  - -If the conveyor tracks to the right, turn the right-side tension and tracking screw clockwise approximately in 1/4 turn increments.
  - -If the conveyor tracks to the left, turn the left-side tension and tracking screw clockwise in approximate-ly  $^{1/4}$  turn increments.
- 5. Run the conveyor belt for at least ten minutes to determine if the tracking is correct and the tension stays the same.
- 6. Repeat steps as required to achieve the correct tension and tracking.



secured and away from moving parts.

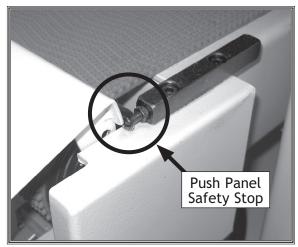


Figure 31. Push panel safety stop.

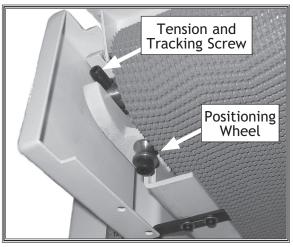


Figure 32. Conveyor belt tension and tracking adjustment locations.



#### **Pressure Rollers**

The pressure rollers are factory set so they are parallel with each other, parallel with the sanding drum, and parallel with the surface of the conveyor table.

To reduce snipe, double check the pressure roller depth adjustment. The front and rear pressure roller should be approximately 0.3-0.5mm below the level of the sanding drum.

To adjust the pressure rollers, do these steps:

- 1. DISCONNECT THE SANDER FROM POWER!
- 2. Make two gauge boards that are 37" long and uniform in thickness.
- 3. Connect the air pressure and set it to 75 PSI.
- 4. Install the sanding belt and turn the belt tensioning knob to tension the belt.
- 5. Position each board on each side of the conveyor belt and directly below the front and back pressure rollers (see Figure 33).
- 6. Loosen the adjustment jam nuts and raise the pressure rollers above the sanding belt roller with the adjustment bolts shown in Figure 33.
- 7. Raise the table up until the boards barely touch the sanding belt, and mark the table handwheel position with a piece of tape or chalk.
- Turn the table handwheel counterclockwise <sup>1</sup>/<sub>8</sub><sup>th</sup> of a turn, this will lower the table approximately 0.4mm.
- **9.** Now lower the front and rear pressure rollers so that both ends barely touch the boards.

**Note:** The pressure rollers should now be properly set between 0.3-0.5mm below the sanding drum. Keep in mind that roller tension, besides roller depth, will also affect the feeding operations.

12. Tighten the adjustment jam nuts.

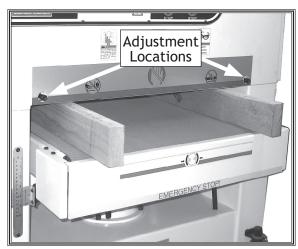


Figure 33. Gauge boards placed under pressure rollers.



#### Belt Tracking Limit Switch

Belt tracking limit switches are placed on both sides of the machine to act as emergency machine stops if the belt travels too far to one side during oscillation. (see **Figure 34**).

To adjust the belt tracking limit switches, do these steps:

- 1. DISCONNECT THE SANDER FROM POWER!
- 2. Make sure the belt tracking and oscillation is adjusted.
- 3. Release the belt tension, center the sanding belt on the top roller, then re-tension the belt.
- 4. Measure the distance from the edge of the sanding belt to the ceramic rod protruding from the switch.
- 5. Loosen the adjustment bolt shown in Figure 34, and move the switch so the belt and the ceramic rod have approximately 1/2" clearance from each other.
- 6. Tighten the bolt and repeat the adjustment with the other side if necessary.
- 7. Start the sander and make sure it is working properly.

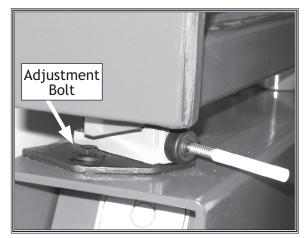


Figure 34. Tracking safety switch adjustment bolt.

#### Troubleshooting

This section is provided for your convenience—it is not a substitute for the Woodstock Service Department. If you need help troubleshooting, you need replacement parts, or you are unsure of how to perform the procedures in this section, then feel free to call our Technical Support at (360) 734-3482.

#### Motor & Electrical

<b>SYMPTOM</b>	POSSIBLE CAUSE	CORRECTIVE ACTION
Machine does not	1. Emergency stop push-button is engaged/	1. Rotate clockwise slightly until it pops
start or a breaker trips.	faulty. 2. Power supply is at fault/switched <b>OFF</b> .	out/replace it. 2. Ensure hot lines have correct voltage on all legs and main power supply is switched <b>ON</b> .
	<ol> <li>Wall fuse/circuit breaker is blown/ tripped.</li> </ol>	<ol> <li>Ensure power supply circuit is correct size for machine startup load; replace weak breaker.</li> </ol>
	4. Fuse in machine electrical box has blown.	4. Correct short/replace fuse in machine electrical box.
	<ol> <li>Sanding belt position limit switch is depressed/at fault.</li> </ol>	<ol> <li>Adjust belt tracking to correct working range; replace faulty limit switch.</li> </ol>
	<ol> <li>Plug/receptacle is at fault or wired incorrectly.</li> </ol>	6. Test for good contacts; correct the wiring.
	7. Thermal overload relay has tripped.	<ol> <li>Turn cut-out dial to increase working amps and push the reset pin. Replace if tripped multiple times (weak relay).</li> </ol>
	<ol> <li>Start capacitor is at fault.</li> <li>Motor ON button or ON/OFF switch is at fault.</li> </ol>	<ol> <li>Test/replace if faulty.</li> <li>Replace faulty ON button or ON/OFF switch.</li> </ol>
	<ol> <li>Contactor not getting energized/has burnt contacts.</li> <li>Wiring is open/has high resistance.</li> </ol>	<ol> <li>Test for power on all legs and contactor operation. Replace unit if faulty.</li> <li>Check for broken wires or disconnected/ corroded connections, and repair/replace</li> </ol>
	<ol> <li>Emergency stop push-panel is stuck/ switch is at fault.</li> <li>Centrifugal switch is at fault.</li> </ol>	as necessary. 12. Free push-panel from binding; replace faulty switch. 13. Adjust/replace the centrifugal switch in
		the motor.
	<ol> <li>Motor is at fault.</li> <li>Motor connection wired incorrectly.</li> </ol>	<ol> <li>14. Test/repair/replace.</li> <li>15. Correct motor wiring connections.</li> </ol>
Motor stalls (resulting in blown fuses or tripped circuit).	<ol> <li>Feed rate too high.</li> <li>Depth of cut too great.</li> </ol>	<ol> <li>Feed workpiece slower.</li> <li>Reduce depth of cut.</li> </ol>
Loud, repetitious noise coming from machine	<ol> <li>Pulley set screws or keys are missing or loose.</li> <li>Motor fan is hitting the cover.</li> <li>V-belt is at fault.</li> </ol>	<ol> <li>Inspect keys and set screws. Replace or tighten if necessary.</li> <li>Replace motor fan.</li> <li>Replace V-belt.</li> </ol>
Machine is loud, overheats or bogs down in the cut.	<ol> <li>Excessive depth of cut.</li> <li>Dull sanding belt.</li> </ol>	<ol> <li>Decrease depth of cut.</li> <li>Replace sanding belt.</li> </ol>





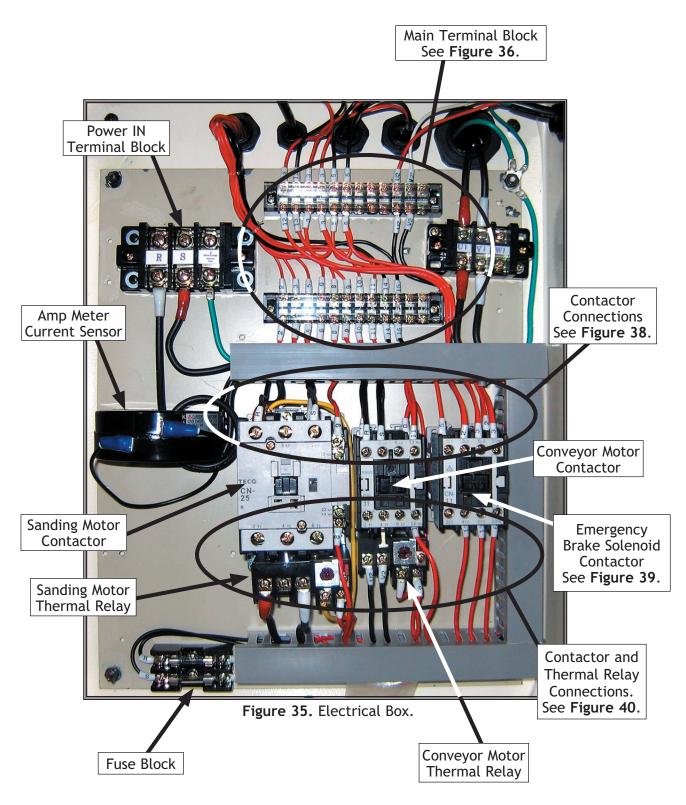


#### Sanding and Results

SYMPTOM POSSIBLE CAUSE		CORRECTIVE ACTION	
Edges of wood are rounded.	1. Excessive depth of cut.	1. Reduce depth of cut.	
Uneven thickness from left to right of board.	<ol> <li>Feed table not parallel to sanding roller.</li> <li>Conveyor belt is worn.</li> </ol>	<ol> <li>Adjust the table.</li> <li>Replace conveyor belt.</li> </ol>	
Workpiece slips on conveyor belt.	<ol> <li>Pressure rollers set too high.</li> <li>Dirty conveyor belt.</li> <li>Conveyor belt is worn.</li> </ol>	<ol> <li>Lower pressure rollers.</li> <li>Clean conveyor belt.</li> <li>Replace conveyor belt.</li> </ol>	
Straight strip of notches on workpiece.	1. Pressure rollers are dirty or damaged.	1. Clean or repair pressure rollers.	
Snake-shaped marks on workpiece.	1. Sanding belt damaged or dirty.	1. Clean or replace sanding belt.	
Sandpaper quickly becomes dull.	<ol> <li>Sanding belt has been stored in a damp environment.</li> <li>Sanding belt has been folded or smashed.</li> </ol>	<ol> <li>Store sanding belt away from extremely damp or wet environments.</li> <li>Store sanding belt on end or hang them, not folded or bent.</li> </ol>	
Burn marks on workpiece or sandpaper.	<ol> <li>Using too fine of sanding grit.</li> <li>Sanding depth too aggressive.</li> <li>Work held still for too long.</li> </ol>	<ol> <li>Use a coarser grit sanding belt</li> <li>Reduce sanding depth and/or install coarser sandpaper.</li> <li>Do not keep workpiece in one place for too long.</li> </ol>	
Glazed sanding surfaces.	<ol> <li>Sanding wet stock.</li> <li>Sanding stock with high residue.</li> </ol>	<ol> <li>Dry stock properly before sanding.</li> <li>Use different stock. Or, accept the characteristics of the stock and plan on cleaning/replacing sanding belts frequently.</li> </ol>	



## **Electrical Box Component Locations**





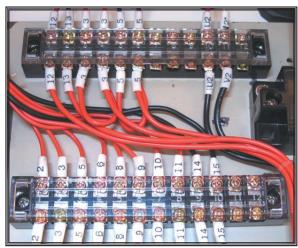


Figure 36. Main terminal blocks.



Figure 37. Emergency brake switch.



Figure 39. Emergency brake solenoid.

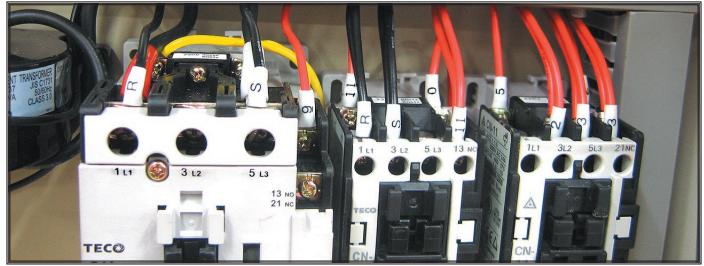


Figure 38. Contactor connections.

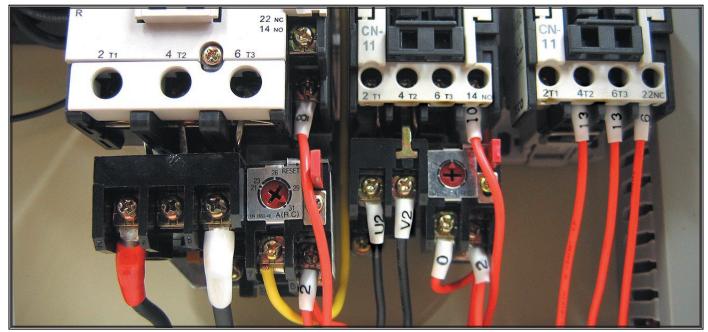
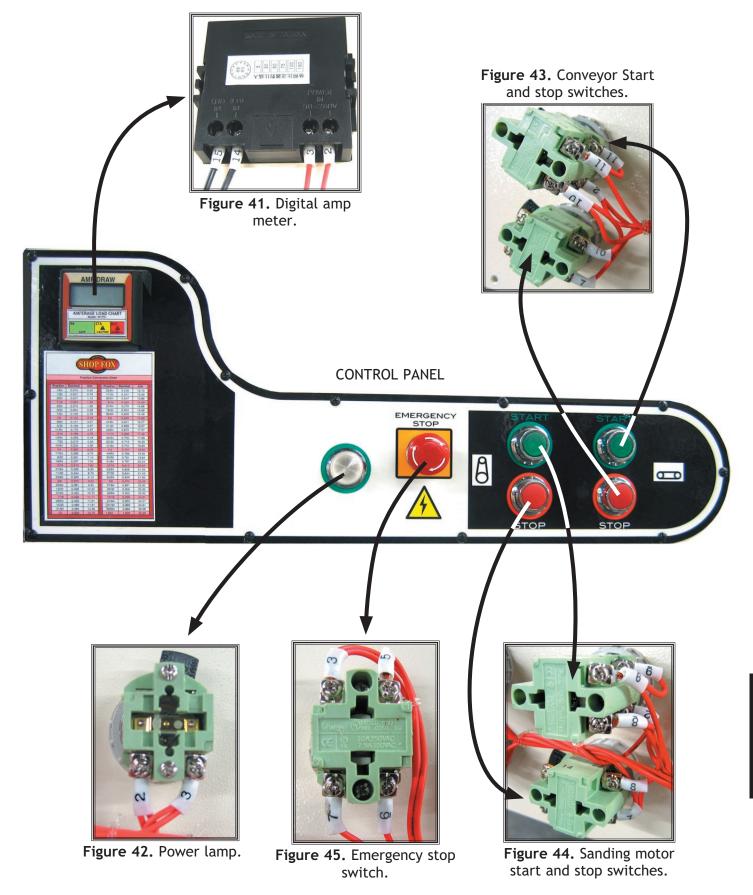


Figure 40. Contactor and thermal relay connections.

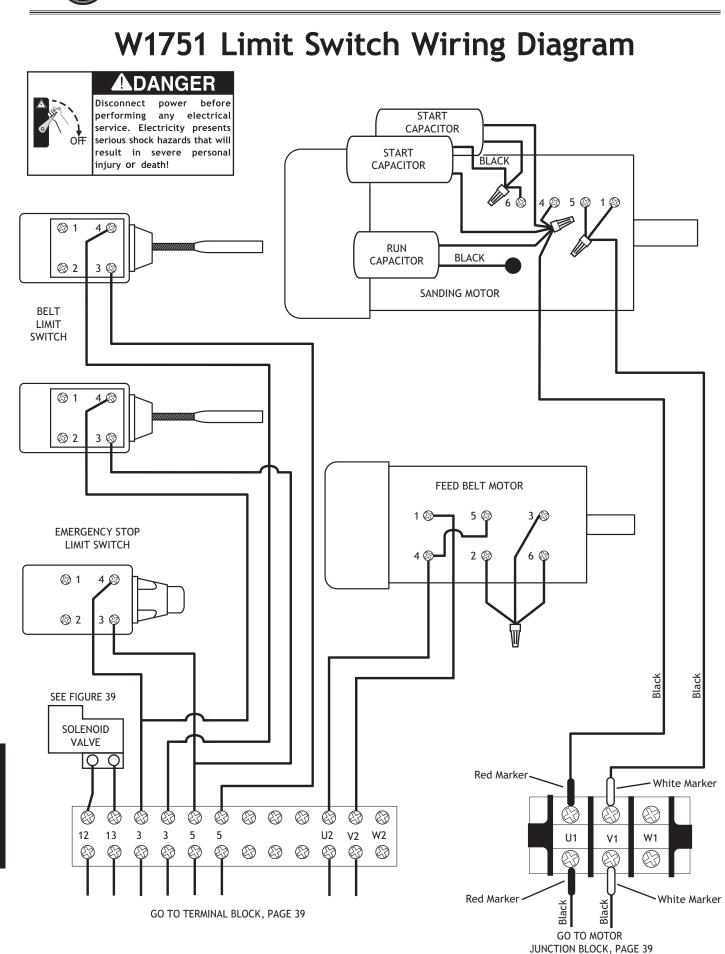
-36-Download from Www.Somanuals.com. All Manuals Search And Download.





(SHOP FOX)

-37-Download from Www.Somanuals.com. All Manuals Search And Download.

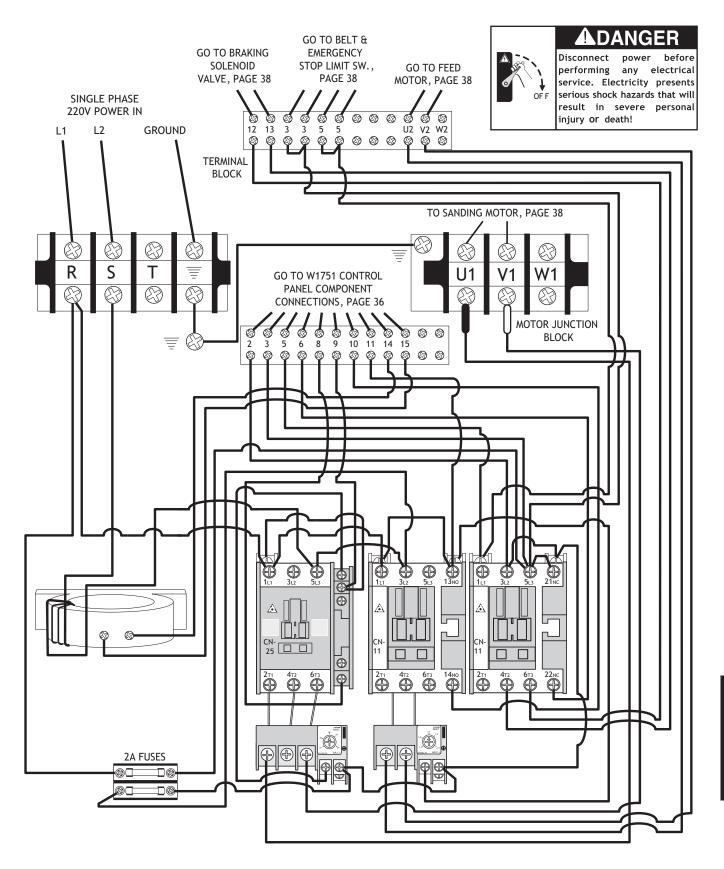


-38-Download from Www.Somanuals.com. All Manuals Search And Download.

(SHOP FOX)



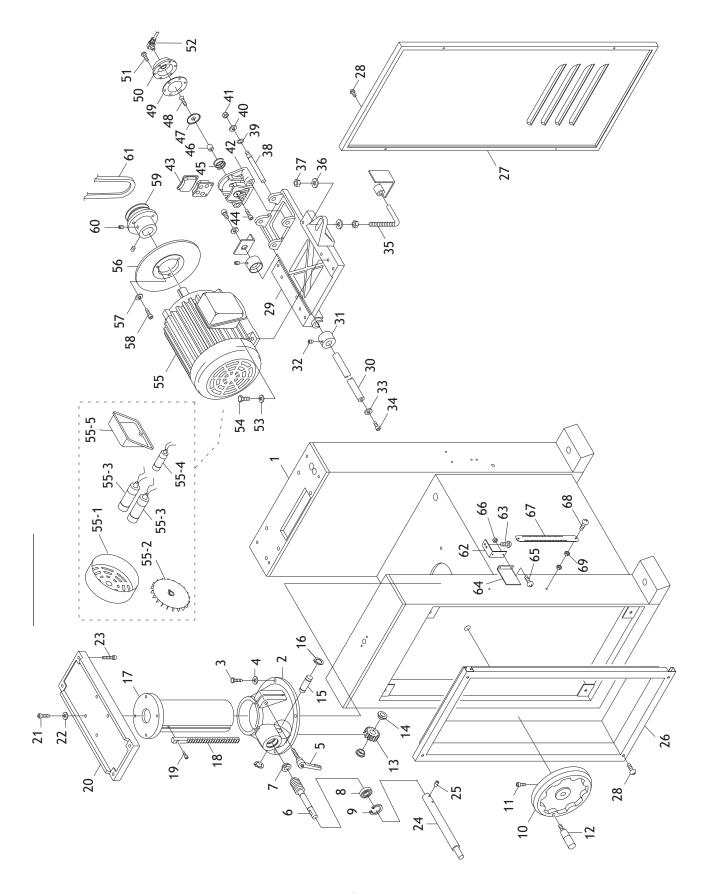
# W1751 General Wiring Diagram



-39-Download from Www.Somanuals.com. All Manuals Search And Download.



## Lower Cabinet and Sanding Motor



-40-Download from Www.Somanuals.com. All Manuals Search And Download.

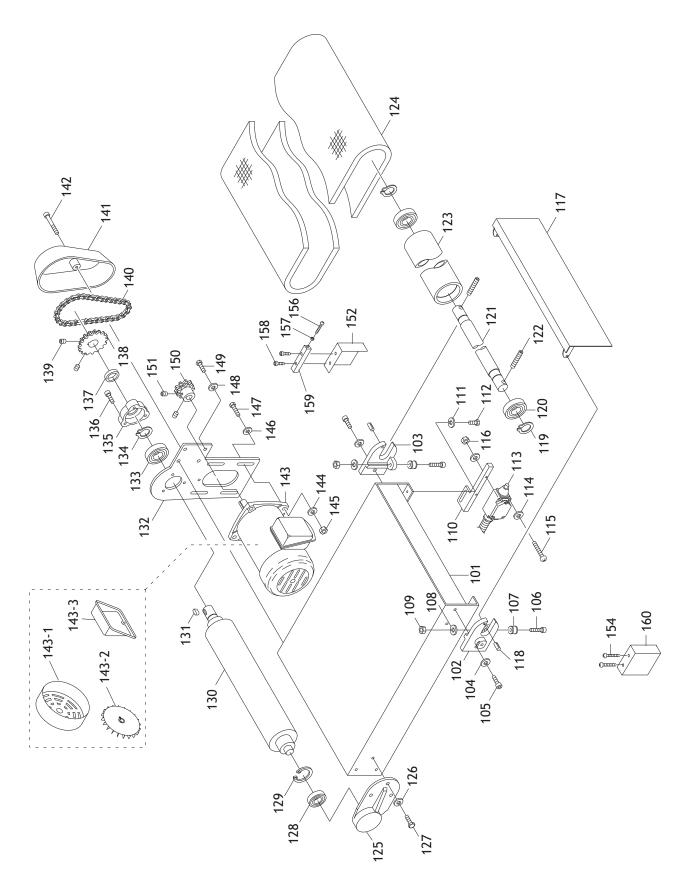


REF	PART #	DESCRIPTION
1	X1751001	MACHINE BASE
2	X1751002	QUILL BASE
3	XPB32M	HEX BOLT M10-1.5 X 25
4	XPLW06M	LOCK WASHER 10MM
5	X1751005	LEVER BOLT M10-1.5
6	X1751006	WORM GEAR SHAFT
7	XP51102	THRUST BEARING 51102
8	XP6203	BALL BEARING 6203ZZ
9	XPR23M	INT RETAINING RING 40MM
10	X1751010	HAND WHEEL
11	XPSB64M	CAP SCREW M10-1.5 X 25
12	X1751012	HANDLE
13	X1751013	WORM GEAR 37T
14	X1751014	BUSHING
15	X1751015	GEAR SHAFT
16	XPR18M	EXT RETAINING RING 17MM
17	X1751017	QUILL
18	X1751018	RACK
19	XPSB26M	CAP SCREW M6-1 X 12
20	X1751020	SUPPORT FRAME
21	XPSB12M	CAP SCREW M8-1.25 X 40
22	XPLW04M	LOCK WASHER 8MM
23	XPSB12M	CAP SCREW M8-1.25 X 40
24	X1751024	WORM GEAR SHAFT
25	XPSS26M	SET SCREW M58 X 6
26	X1751026	MACHINE BASE COVER (LEFT)
27	X1751027	MACHINE BASE COVER (RIGHT)
28	XPS47M	PHLP HD SCR M6-1 X 25
29	X1751029	MOTOR BASE
30	X1751030	SETTING SHAFT
31	X1751031	LOCK BUSHING
32	XPSS09M	SET SCREW M8-1.25 X 20
33	XPW04M	FLAT WASHER 10MM
34	XPSB62M	CAP SCREW M10-1.5 X 12
35	X1751035	ADJUSTMENT STUD
36	XPW06M	FLAT WASHER 12MM
37	XPN09M	HEX NUT M12-1.75

REF	PART #	DESCRIPTION
38	X1751038	BRAKE PIN
39	XPR47M	EXT RETAINING RING 13MM
40	XPLW06M	LOCK WASHER 10MM
41	XPN02M	HEX NUT M10-1.5
42	X1751042	BRAKE CALIPER
43	X1751043	BRAKE LINING SET
44	XPSB26M	CAP SCREW M6-1 X 12
45	X1751045	COMPRESSION SPRING
46	X1751046	BRAKE
47	X1751047	PLATE
48	XPFH12M	FLAT HD SCR M6-1 X 25
49	X1751049	DIAPHRAM
50	X1751050	TOP COVER
51	XPS20M	PHLP HD SCR M58 X 15
52	X1751052	PLASTIC CONNECTOR L-6-1/8"
53	XPLW06M	LOCK WASHER 10MM
54	X1751054	FIXING SCREW M10-1.5 X 30
55	X1751055	MOTOR 7.5HP, 220V, 1-PH
55-1	X1751055-1	FAN
55-2	X1751055-2	FAN COVER
55-3	XPC400C	S. CAPACITOR 400MFD/250VAC
55-4	XPC050A	R. CAPACITOR 50MFD/350VAC
55-5	X1751055-5	ELECTRICAL COVER
56	X1751056	BRAKE ROTOR
57	XPLW06M	LOCK WASHER 10MM
58	XPSB75M	CAP SCREW M10-1.5 X 18
59	X1751059	MOTOR PULLEY
60	XPSS13M	SET SCREW M10-1.5 X 12
61	XPVA71	V-BELT A-71 4L710
62	X1751062	"L" BRACKET
63	XPS09M	PHLP HD SCR M58 X 10
64	X1751064	SCALE GUIDE
65	XPS09M	PHLP HD SCR M58 X 10
66	XPN06M	HEX NUT M58
67	X1751067	SCALE
68	XPS06M	PHLP HD SCR M58 X 20
69	XPN06M	HEX NUT M58



### **Conveyor System**



-42-Download from Www.Somanuals.com. All Manuals Search And Download.

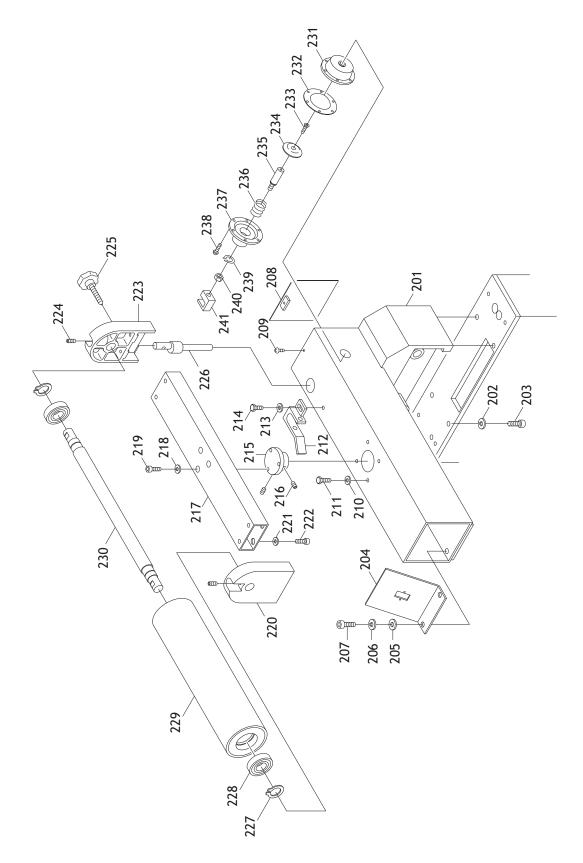


REF	PART #	DESCRIPTION
101	X1751101	CONVEYOR TABLE
102	X1751102	CONVEYOR ROLLER BRACKET(L)
103	X1751103	CONVEYOR ROLLER BRACKET(R)
104	XPLW04M	LOCK WASHER 8MM
105	XPSB31M	CAP SCREW M8-1.25 X 25
106	XPSB12M	CAP SCREW M8-1.25 X 40
107	X1751107	BRASS ROLLER
108	XPLW04M	LOCK WASHER 8MM
109	XPN03M	HEX NUT M8-1.25
110	X1751110	LIMIT SWITCH BASE
111	XPW03M	FLAT WASHER 6MM
112	XPB02M	HEX BOLT M6-1 X 12
113	X1751113	LIMIT SWITCH
114	XPW05M	FLAT WASHER 4MM
115	XPS48M	PHLP HD SCR M47 X 50
116	XPN04M	HEX NUT M47
117	X1751117	EMERGENCY BRAKE PANEL
118	XPRP03M	ROLL PIN 5 X 20
119	XPR11M	EXT RETAINING RING 25MM
120	XP6305	BALL BEARING 6305ZZ
121	X1751121	CONVEYOR AXLE
122	X1751122	ALIGNMENT ADJUSTER
123	X1751123	CONVEYOR ROLLER
124	X1751124	CONVEYOR BELT
125	X1751125	BEARING SEAT
126	XPLW04M	LOCK WASHER 8MM
127	XPB09M	HEX BOLT M8-1.25 X 20
128	XP6204	BALL BEARING 6204ZZ
129	XPR25M	INT RETAINING RING 47MM
130	X1751130	MAIN CONVEYOR ROLLER
131	XPK67M	KEY 8 X 7 X 15

REF	PART #	DESCRIPTION
132	X1751132	MOTOR MOUNT PLATE
133	XP6205	BALL BEARING 6205ZZ
134	XPR11M	EXT RETAINING RING 25MM
135	X1751135	BEARING COVER
136	XPSB74M	CAP SCREW M6-1 X 18
137	X1751137	BUSHING
138	X1751138	CHAIN WHEEL 19T X 24T
139	XPSS02M	SET SCREW M6-1 X 6
140	X1751140	CHAIN
141	X1751141	ROLLER CHAIN COVER
142	XPSB37M	CAP SCREW M6-1 X 50
143	X1751143	FEED MOTOR 1/4 HP
143-1	X1751143-1	FAN COVER
143-2	X1751143-2	FAN
143-3	X1751143-3	WIRING COVER
144	XPLW04M	LOCK WASHER 8MM
145	XPN03M	HEX NUT M8-1.25
146	XPW01M	FLAT WASHER 8MM
147	XPB26M	HEX BOLT M8-1.25 X 30
148	XPLW04M	LOCK WASHER 8MM
149	X1751149	FIXING SCREW M8-1.25 X 20
150	X1751150	CHAIN WHEEL 12T
151	XPSS02M	SET SCREW M6-1 X 6
152	X1751152	SIDE COVER (R)
154	XPS14M	PHLP HD SCR M6-1 X 12
156	XPS06M	PHLP HD SCR M58 X 20
157	XPN06M	HEX NUT M58
158	XPSB02M	CAP SCREW M6-1 X 20
159	X1751159	GUIDE BLOCK
160	X1751160	SIDE COVER (L)



## **Upper Roller System**



-44-Download from Www.Somanuals.com. All Manuals Search And Download.

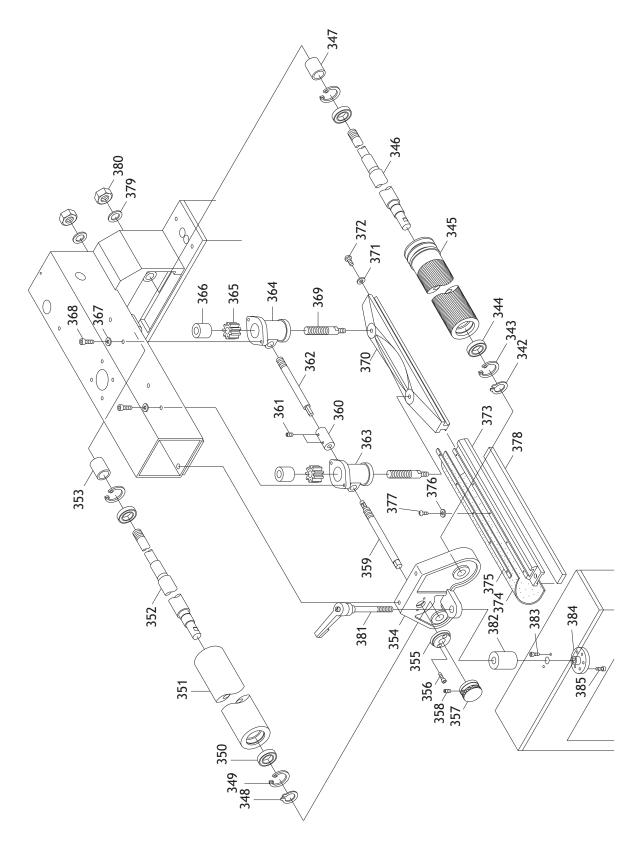


REF	PART #	DESCRIPTION
201	X1751201	CONTACT ROLLER BASE
202	XPLW06M	LOCK WASHER 10MM
203	XPSB72M	CAP SCREW M10-1.5 X 30
204	X1751204	SWITCH PLATE
205	XPW04M	FLAT WASHER 10MM
206	XPLW06M	LOCK WASHER 10MM
207	XPSB72M	CAP SCREW M10-1.5 X 30
208	X1751208	COVER
209	XPS02M	PHLP HD SCR M47 X 12
210	XPLW04M	LOCK WASHER 8MM
211	XPB07M	HEX BOLT M8-1.25 X 25
212	X1751212	FORK
213	XPW03M	FLAT WASHER 6MM
214	XPB02M	HEX BOLT M6-1 X 12
215	X1751215	CYLINDER FLANGE
216	XPSS04M	SET SCREW M6-1 X 12
217	X1751217	SUPPORT TUBE
218	XPLW04M	LOCK WASHER 8MM
219	XPSB76M	CAP SCREW M8-1.25 X 18
220	X1751220	TOP ROLLER SUPPORT
221	XPLW04M	LOCK WASHER 8MM

REF	PART #	DESCRIPTION
222	XPSB76M	CAP SCREW M8-1.25 X 18
223	X1751223	TOP ROLLER ECCENTRIC FRAME
224	XPSS04M	SET SCREW M6-1 X 12
225	X1751225	KNOB BOLT M8-1.25 X 80
226	X1751226	ECCENTRIC SHAFT
227	XPR11M	EXT RETAINING RING 25MM
228	XP6205	BALL BEARING 6205ZZ
229	X1751229	TOP ROLLER
230	X1751230	TOP ROLLER SHAFT
231	X1751231	TOP COVER
232	X1751232	DIAPHRAM
233	XPS14M	PHLP HD SCR M6-1 X 12
234	X1751234	PLATE
235	X1751235	SHAFT
236	X1751236	COMPRESSION SPRING
237	X1751237	BOTTOM COVER
238	XPS06M	PHLP HD SCR M58 X 20
239	XPR05M	EXT RETAINING RING 15MM
240	XPN02M	HEX NUT M10-1.5
241	X1751241	OSCILLATION SQUARE



## Platen and Sanding Drum System



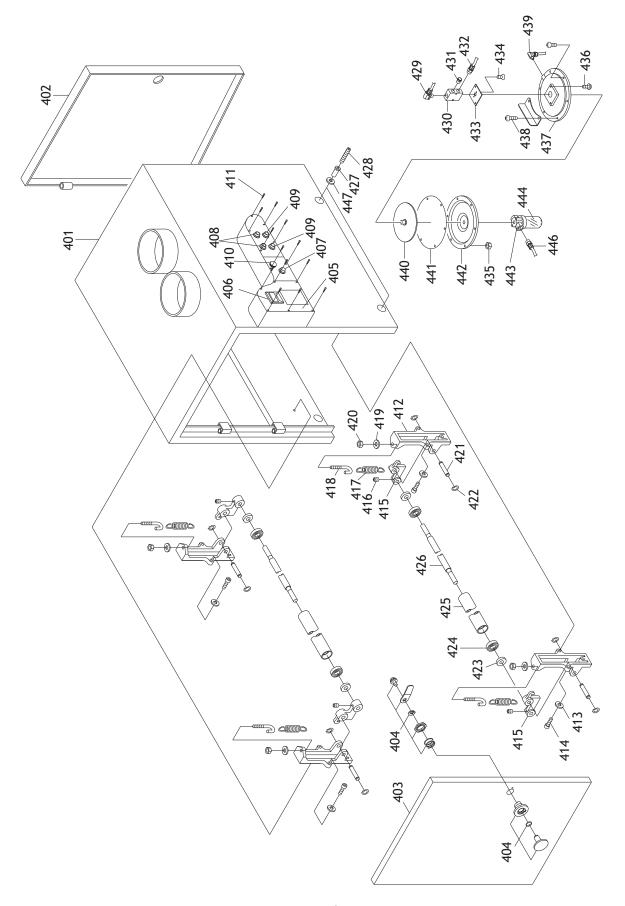


REF	PART #	DESCRIPTION
342	XPR11M	EXT RETAINING RING 25MM
343	XPR25M	INT RETAINING RING 47MM
344	XP6005	BALL BEARING 6005ZZ
345	X1751345	CONTACT ROLLER
346	X1751346	CONTACT ROLLER SHAFT
347	X1751347	SLEEVE
348	XPR11M	EXT RETAINING RING 25MM
349	XPR25M	INT RETAINING RING 47MM
350	XP6005	BALL BEARING 6005ZZ
351	X1751351	SUPPORT ROLLER
352	X1751352	SUPPORTING ROLLER SHAFT
353	X1751353	SLEEVE
354	X1751354	SUPPORTING ROLLER BASE
355	X1751355	MICROMETER BASE
356	XPSB26M	CAP SCREW M6-1 X 12
357	X1751357	MICROMETER DIAL
358	XPSS04M	SET SCREW M6-1 X 12
359	X1751359	MAIN WORM GEAR SHAFT
360	X1751360	CONNECTION COUPLING
361	XPSS04M	SET SCREW M6-1 X 12
362	X1751362	SUPPORTING WORM GEAR SHAFT
363	X1751363	WORM GEAR BASE (L)

REF	PART #	DESCRIPTION
364	X1751364	WORM GEAR BASE (R)
365	X1751365	WORM GEAR
366	X1751366	GEAR BUSHING
367	XPLW04M	LOCK WASHER 8MM
368	XPSB31M	CAP SCREW M8-1.25 X 25
369	X1751369	VERTICAL MICROMETER SCREW
370	X1751370	GRAPHITE SLIDE (MALE)
371	XPW03M	FLAT WASHER 6MM
372	XPS14M	PHLP HD SCR M6-1 X 12
373	X1751373	GRAPHITE SLIDE (FEMALE)
374	X1751374	CARBON GRAPHITE 90 X 675 MM
375	X1751375	SET PLATE
376	XPW05M	FLAT WASHER 4MM
377	XPS02M	PHLP HD SCR M47 X 12
378	X1751378	FELT PLATEN
379	XPLW07M	LOCK WASHER 20MM
380	X1751380	HEX NUT M20 X 1.5
381	X1751381	LEVER M12-1.75 X 90
382	X1751382	SPACER
383	XPSB74M	CAP SCREW M6-1 X 18
384	X1751384	LOCK LEVER ANCHOR FLANGE
385	XPSB74M	CAP SCREW M6-1 X 18







-48-Download from Www.Somanuals.com. All Manuals Search And Download.

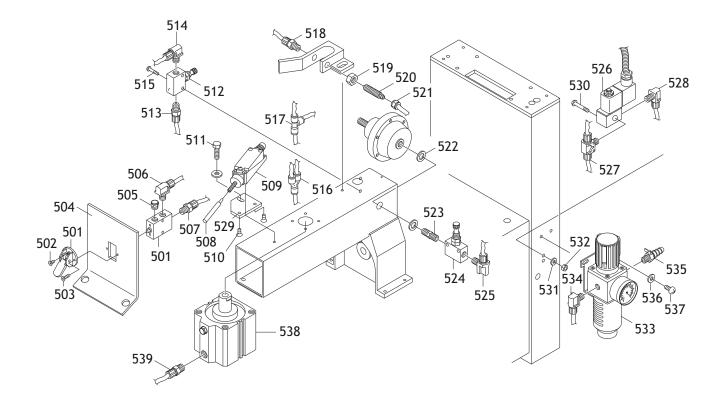


REF	PART #	DESCRIPTION
401	X1751401	MACHINE FRAME
402	X1751402	MACHINE FRAME DOOR (R)
403	X1751403	MACHINE FRAME DOOR (L)
404	X1751404	LOCK ASSEMBLY
405	X1751405	CONTROL PANEL
406	X1751406	DIGITAL AMMETER
407	X1751407	POWER LAMP
408	X1751408	START BUTTON
409	X1751409	STOP BUTTON
410	X1751410	EMERGENCY STOP BUTTON
411	XPS31M	PHLP HD SCR M6-1 X 35
412	X1751412	PRESSURE ROLLER FRAME
413	XPLW03M	LOCK WASHER 6MM
414	XPSB06M	CAP SCREW M6-1 X 25
415	X1751415	TILTING ARM
416	XPSS26M	SET SCREW M58 X 6
417	X1751417	TENSION SPRING
418	X1751418	SPRING HOOK
419	XPW01M	FLAT WASHER 8MM
420	XPN03M	HEX NUT M8-1.25
421	X1751421	PIN
422	XPR01M	EXT RETAINING RING 10MM
423	X1751423	BEARING COVER

REF	PART #	DESCRIPTION
424	XP6001	BALL BEARING 6001ZZ
425	X1751425	PRESSURE ROLLER
426	X1751426	PRESSURE SHAFT
427	XPN03M	BUSHING NUT M8-1.25
428	XPSS42M	SET SCREW M8-1.25 X 50
429	X1751429	PLASTIC CONNECTOR L-6-1/8"
430	X1751430	VALVE 1/8"
431	X1751431	SILENCER 1/8"
432	X1751432	PLASTIC CONNECTOR C-6-1/8"
433	X1751433	GASKET
434	XPFH49M	FLAT HD SCR M35 X 6
435	XPN06M	HEX NUT M58
436	XPS02M	PHLP HD SCR M47 X 12
437	X1751437	TOP ALUMINUM COVER
438	XPS06M	PHLP HD SCR M58 X 20
439	X1751439	BRASS CONNECTOR 1/4" LFS
440	X1751440	PLATE
441	X1751441	DIAPHRAM
442	X1751442	BOTTOM ALUMINUM COVER
443	X1751443	DUST SEPARATOR HEAD
444	X1751444	DUST SEPARATOR CUP
446	X1751446	PLASTIC CONNECTOR C-6-1/8"
447	XPLW04M	LOCK WASHER 8MM



## Air System

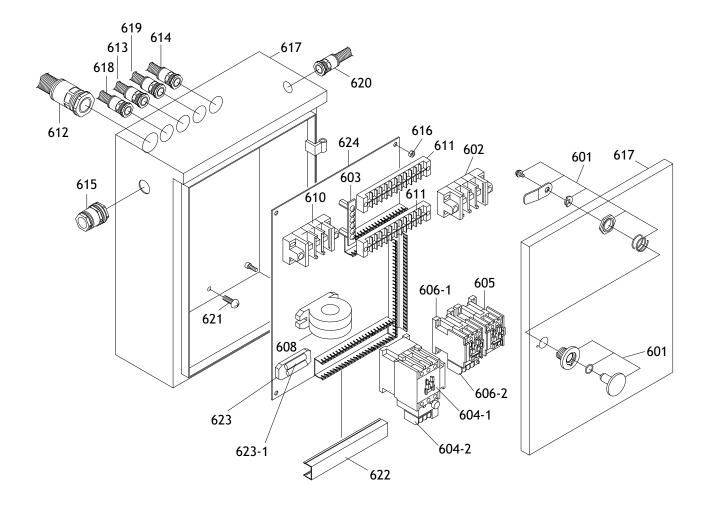


REF	PART #	DESCRIPTION
501	X1751501	SWITCHING VALVE ASSEMBLY
502	XPFH49M	FLAT HD SCR M35 X 6
503	XPFH49M	FLAT HD SCR M35 X 6
504	X1751504	LIMIT SWITCH PANEL
505	X1751505	SILENCER 1/8"
506	X1751506	PLASTIC CONNECTOR L-6-1/8"
507	X1751507	PLASTIC CONNECTOR C-6-1/8"
508	X1751508	CERAMIC PIN
509	X1751509	LIMIT SWITCH
510	XPFH05M	FLAT HD SCR M58 X 12
511	XPB02M	HEX BOLT M6-1 X 12
512	X1751512	AIR VALVE 1/8"
513	X1751513	PLASTIC CONNECTOR C-6-1/8"
514	X1751514	PLASTIC CONNECTOR L-6-1/8"
515	XPS52M	PHLP HD SCR M47 X 20
516	X1751516	PLASTIC "Y" CONNECTOR
517	X1751517	PLASTIC "T" CONNECTOR
518	X1751518	PLASTIC CONNECTOR 1/8"
519	X1751519	HEX NUT 3/8"-24
520	X1751520	AIR JET 3/8"-24

REF	PART #	DESCRIPTION
521	X1751521	BRASS NUT 3/8"-24
522	X1751522	BUSHING
523	X1751523	CONNECTOR 1/8"PT X 3/8-24
524	X1751524	AIR VALVE 1/8"
525	X1751525	PLASTIC CONNECTOR L-6-1/8"
526	X1751526	SOLENOID VALVE 1/8" X 220V
527	X1751527	PLASTIC CONNECTOR B-6-1/8"
528	X1751528	PLASTIC CONNECTOR L-6-1/8"
529	X1751529	LIMIT SWITCH BASE
530	XPS25M	PHLP HD SCR M47 X 35
531	XPW05M	FLAT WASHER 4MM
532	XPN04M	HEX NUT M47
533	X1751533	REGULATOR ASSEMBLY
534	X1751534	PLASTIC CONNECTOR L-6-1/4"
535	X1751535	AIR VALVE 1/4" X 5/16"
536	XPW03M	FLAT WASHER 6MM
537	XPS14M	PHLP HD SCR M6-1 X 12
538	X1751538	CYLINDER ASSEMBLY
539	X1751539	PLASTIC CONNECTOR C-6-1/4"



# **Electrical Connections Box**

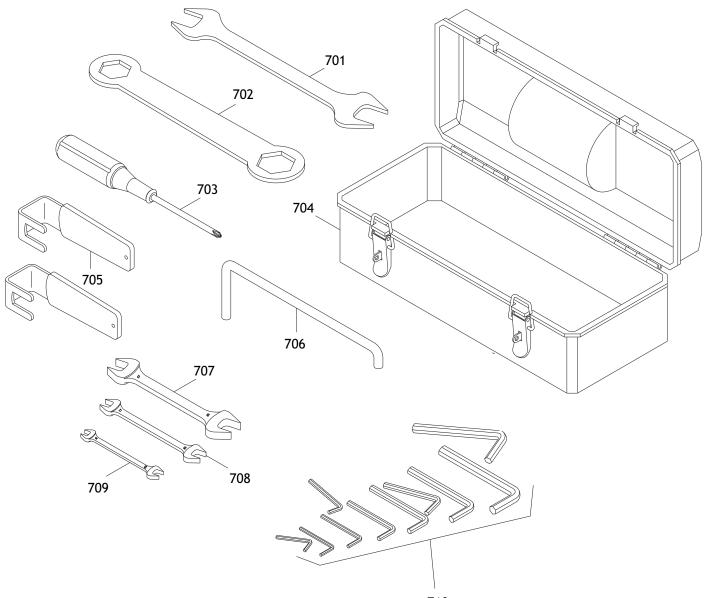


REF	PART #	DESCRIPTION	
601	X1751601	DOOR HANDLE ASSEMBLY	
602	X1751602	TERMINAL BLOCK	
603	X1751603	GROUND WIRE PANEL	
604	X1751604	CONTACTOR W/RELAY TECO CN-25	
604-1	X1751604-1	CONTACTOR TECO CN-25 220V	
604-2	X1751604-2	RELAY TECO RHN-10 21-31A	
605	X1751605	CONTACTOR TECO CN-21 220V	
606	X1751606	CONTACTOR W/RELAY TECO CN-11	
606-1	X1751606-1	CONTACTOR TECO CN-11 220V	
606-2	X1751606-2	RELAY TECO RHN-10 1.3-2.1A	
608	X1751608	CURRENT SENSOR TECO CNS C4030	
610	X1751610	TERMINAL BLOCK	
611	X1751611	TERMINAL BLOCK	
612	X1751612	WIRE SLEEVE	

REF	PART #	DESCRIPTION
613	X1751613	WIRE SLEEVE
614	X1751614	WIRE SLEEVE
615	X1751615	WIRE CONNECTOR (IN)
616	XPN01M	HEX NUT M6-1
617	X1751617	CONTROL BOX
618	X1751618	WIRE SLEEVE
619	X1751619	WIRE SLEEVE
620	X1751620	WIRE SLEEVE
621	XPS14M	PHLP HD SCR M6-1 X 12
622	X1751622	LOOM COVER
623	X1751623	FUSE HOLDER
623-1	X1751623-1	FUSE (2A)
624	X1751624	ELECTRICAL MOUNTING PANEL



#### Accessories



710

# **Accessories List**

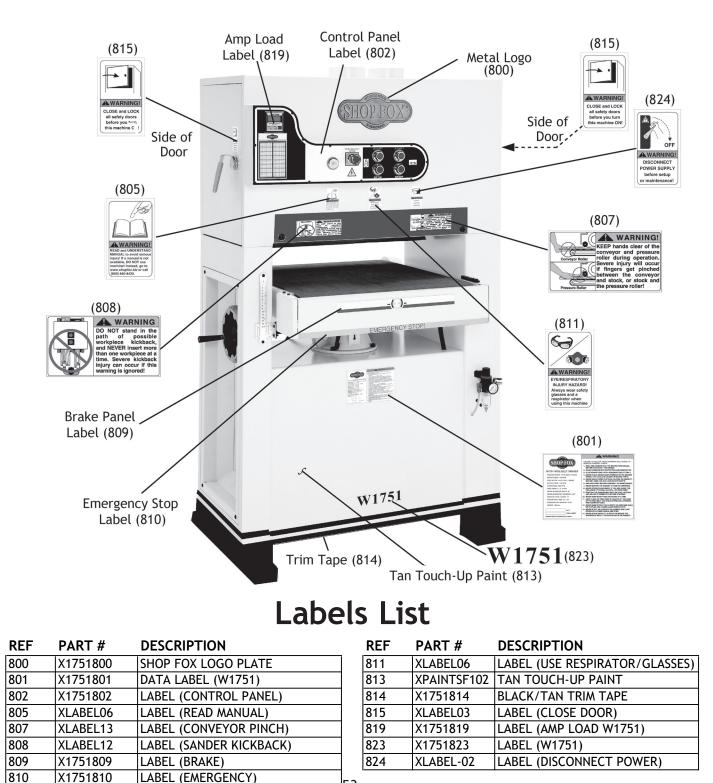
REF	PART #	DESCRIPTION	REF	PART #	DESCRIPTION
701	XPWR1214	COMBO WRENCH 12/14MM	706	X1751706	PLATEN REMOVAL TOOL
702	X1689002	BOX WRENCH 30/37MM	707	XPWR1719	COMBO WRENCH 17/19MM
703	X1751703	PHILLIPS SCREWDRIVER	708	XPWR1113	COMBO WRENCH 11/13MM
704	X1751704	TOOL BOX	709	XPWR810	COMBO WRENCH 8/10MM
705	X1751705	ACCESS DOOR HANDLE	710	X1751710	ALLEN WRENCH SET



# Label Placement

# 

The safety labels on this machine warn and indicate how to protect the operator or bystander from machine hazards. The machine owner MUST maintain the original label location and readability. If a label is removed or becomes unreadable, REPLACE the label before using the machine. For new labels, contact Woodstock International at (360) 734-3482 or www.shopfox.biz.



LABEL (EMERGENCY)



# Warranty

Woodstock International, Inc. warrants all Shop Fox<sup>®</sup> machinery to be free of defects from workmanship and materials for a period of two years from the date of original purchase by the original owner. This warranty does not apply to defects due directly or indirectly to misuse, abuse, negligence or accidents, lack of maintenance, or reimbursement of third party expenses incurred.

Woodstock International, Inc. will repair or replace, at its expense and at its option, the Shop Fox<sup>®</sup> machine or machine part which in normal use has proven to be defective, provided that the original owner returns the product prepaid to the Shop Fox<sup>®</sup> factory service center or authorized repair facility designated by our Bellingham, WA office, with proof of their purchase of the product within two years, and provides Woodstock International, Inc. reasonable opportunity to verify the alleged defect through inspection. If it is determined there is no defect, or that the defect resulted from causes not within the scope of Woodstock International Inc.'s warranty, then the original owner must bear the cost of storing and returning the product.

This is Woodstock International, Inc.'s sole written warranty and any and all warranties that may be implied by law, including any merchantability or fitness, for any particular purpose, are hereby limited to the duration of this written warranty. We do not warrant that Shop Fox® machinery complies with the provisions of any law or acts. In no event shall Woodstock International, Inc.'s liability under this warranty exceed the purchase price paid for the product, and any legal actions brought against Woodstock International, Inc. shall be tried in the State of Washington, County of Whatcom. We shall in no event be liable for death, injuries to persons or property or for incidental, contingent, special or consequential damages arising from the use of our products.

Every effort has been made to ensure that all Shop Fox<sup>®</sup> machinery meets high quality and durability standards. We reserve the right to change specifications at any time because of our commitment to continuously improve the quality of our products.

CUT ALONG DOTTED LINE



# Warranty Registration

City		State	Zip	
hone	#	Email	Invoice #	
Nodel	#Serial #	Dealer Name	Purchase Date	
		n a voluntary basis. It will be used . <b>Of course, all information is st</b>	for marketing purposes to help us rictly confidential.	
	ow did you learn about us? Advertisement Mail Order Catalog		Local Store Other:	
	ow long have you been a wo 0-2 Years	odworker/metalworker? _2-8 Years8-20 `	Years20+ Years	
	ow many of your machines c 0-2		10+	
I. Do	you think your machine re	presents a good value?	YesNo	
i. Wo	ould you recommend Shop I	Fox® products to a friend?	YesNo	
	hat is your age group? 20-29 50-59	30-39 60-69	40-49 70+	
	hat is your annual househol \$20,000-\$29,000 \$50,000-\$59,000	\$30,000-\$39,000	\$40,000-\$49,000 \$70,000+	
. WI	hich of the following magaz	ines do you subscribe to?		
	Model Airplane News Modeltec	Popular MechanicsPopular SciencePopular WoodworkingPractical HomeownerPrecision ShooterProjects in MetalRC ModelerRifleShop NotesShotgun News	Today's HomeownerWoodWooden BoatWoodshop NewsWoodsmithWoodworkWoodworkWoodworker WestOther:	
) <b>.</b> Co	omments:			

FOLD ALONG DOTTED LINE



Place Stamp Here



WOODSTOCK INTERNATIONAL, INC. P.O. BOX 2309 BELLINGHAM, WA 98227-2309

Մեհահահեհեն հետևորդություն հետևորդություն հետևոր

FOLD ALONG DOTTED LINE

TAPE ALONG EDGES--PLEASE DO NOT STAPLE

Download from Www.Somanuals.com. All Manuals Search And Download.

Download from Www.Somanuals.com. All Manuals Search And Download.

Download from Www.Somanuals.com. All Manuals Search And Download.

Free Manuals Download Website <u>http://myh66.com</u> <u>http://usermanuals.us</u> <u>http://www.somanuals.com</u> <u>http://www.4manuals.cc</u> <u>http://www.4manuals.cc</u> <u>http://www.4manuals.cc</u> <u>http://www.4manuals.com</u> <u>http://www.404manual.com</u> <u>http://www.luxmanual.com</u> <u>http://aubethermostatmanual.com</u> Golf course search by state

http://golfingnear.com Email search by domain

http://emailbydomain.com Auto manuals search

http://auto.somanuals.com TV manuals search

http://tv.somanuals.com