



MODEL W1740 12" DRUM SANDER



OWNER'S MANUAL

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

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#7848CR

Printed in Taiwan

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.

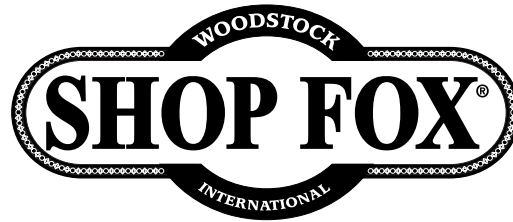
WARNING!

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 those dust masks that are specially designed to filter out microscopic particles.

**Model W1740
12" Drum Sander
Manual Update**
(For Models Manufactured Since 1/10)



Phone #: (360) 734-3482 • Online Tech Support: tech-support@shopfox.biz • Web: www.shopfox.biz

This update covers improvements made to this machine after the owner's manual was printed. The pages in this update supercede the relevant pages in the owner's manual. All page number references refer to the owner's manual for this machine, unless otherwise noted. Keep this update with your owner's manual for future reference. If you have any questions, contact Tech Support at (360) 734-3482 or by email at tech-support@shopfox.biz.

Revision Scope

We added a direct-drive DC feed motor, a new On/Off Push Button Switch, and a thermal circuit breaker to the Model W1740.

These changes affect the following pages of your manual, which we have updated:

- Machine Specifications (Page 4)
- Electrical (Page 9)
- Conveyor Replacement (Page 35)
- Wiring Diagram and Electrical Components (Pages 42-43)
- Parts (Pages 44-48)

Machine Specifications

Sanding Motor	1.5 HP, 16A, 110V, 3450 RPM, Single-Phase
Sanding Motor Power Transfer	V-Belt Drive
Conveyor Motor	1.1A, 1/8 HP, 110V, DC Variable Speed Voltage Motor, 5-55 RPM, Single-Phase
Conveyor Motor Power Transfer	Direct Drive
Drum Speed	2127 FPM
Drum Diameter	4"
Maximum Workpiece Thickness	3 ³ / ₄ "
Minimum Workpiece Thickness	1/8"
Maximum Workpiece Width	12"
Minimum Workpiece Length	8"
Conveyor Feed Rate	2.47-17.3 FPM
Sandpaper Size	3" Wide X 72" Long, Hook and Loop Style
Dust Port	2 ¹ / ₂ "
Handwheel Rotation-to-Table Travel	360°= 0.025"
Footprint	22 ¹ / ₄ " Wide x 13 ¹ / ₂ " Deep
Product Dimensions (Length x Width x Height)	27 ¹ / ₄ " x 24" x 25 ⁷ / ₈ "
Machine Weight	149 lbs.

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ELECTRICAL

⚠ WARNING
 The machine must be properly set up before it is safe to operate. **DO NOT** connect this machine to the power source until instructed to do so in the "Test Run" portion of this manual.

110V Operation

The Model W1740 is wired for 110V operation. The power supply circuit used for this machine **MUST** be grounded and rated for the amperage given below. Never replace a circuit breaker with one of higher amperage without consulting a qualified electrician to ensure compliance with wiring codes.

This machine must be grounded! The electrical cord supplied with this machine comes with a grounding pin. If your outlet does not accommodate a ground pin, have it replaced by a qualified electrician.

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 or circuit overload hazard—consult a qualified electrician to reduce this risk.

Extension Cords

We do not recommend using an extension cord; however, if you have no alternative, use the following guidelines:

- Use a cord rated for Standard Service (S).
- Do not use an extension cord longer than 50 feet.
- Ensure that the cord has a ground wire and pin.
- Use the gauge size listed below as a minimum.

Electrical Specifications

Minimum Requirements

Operating Voltage	Amp Draw	Min. Circuit Size	Included Plug	Extension Cord
110V Operation	17.1 Amps	20	NEMA 5-15	12 Gauge

Recommended Requirements

Operating Voltage	Amp Draw	Min. Circuit Size	Plug/Recommended Plug	Extension Cord
110V Operation	17.1 Amps	30A	NEMA L5-30	12 Gauge

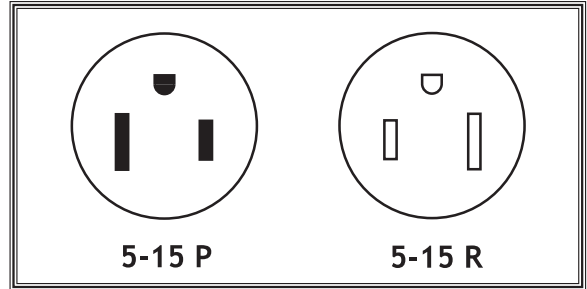


Figure 1. Included 5-15 plug and receptacle.

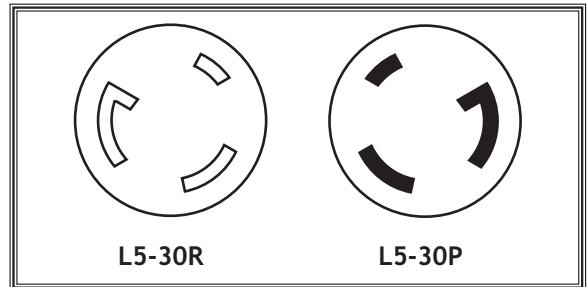


Figure 2. Recommended L5-30 plug and receptacle.

⚠ WARNING

DO NOT work on your electrical system if you are unsure about electrical codes and wiring! Seek assistance from a qualified electrician. Ignoring this warning can cause electrocution, fire, or machine damage.

Conveyor Replacement

We have added new instructions to the conveyor replacement procedure, since the conveyor feed motor has changed to a direct drive, non-chain driven model. Perform **Steps 1-17** before doing the revised steps.

The following Steps replace **Steps 18-21** on **Page 35**:

18. Lay the conveyor table on the edge of a workbench so the conveyor motor can hang freely.
19. (A) Remove the set screw shown in **Figure 3**, (B) remove the conveyor motor cover from the left rear roller bracket (3 cap screws and 3 flat washers), then (C) remove the conveyor motor (4 cap screws) from the conveyor motor cover (**Figure 3**).
20. Remove the rear left roller bracket (2 cap screws).

Proceed with **Step 22** in your manual.

Changing Motor Brushes

If the motor fails to develop full power or otherwise appears to run sluggishly, the motor brushes may need to be replaced.

To replace the motor brushes, do these steps:

1. DISCONNECT POWER TO THE SANDER!
2. Remove each brush cover with a flat head screwdriver and remove the brushes from the motor, as shown in **Figure 4**.
3. Insert the new carbon brushes into the holes in the motor housing.
4. Re-install the brush covers.

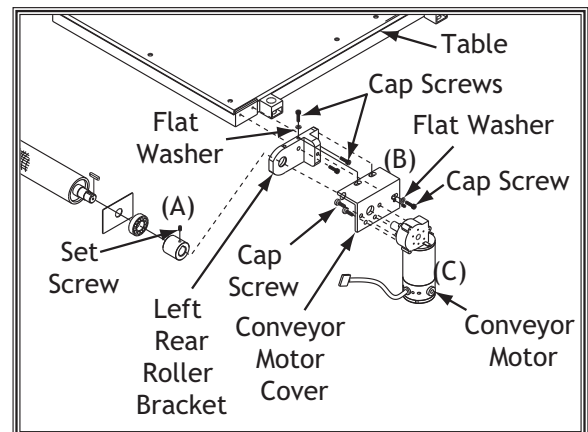


Figure 3. Removing conveyor motor and rear roller bracket (not all components shown for clarity).

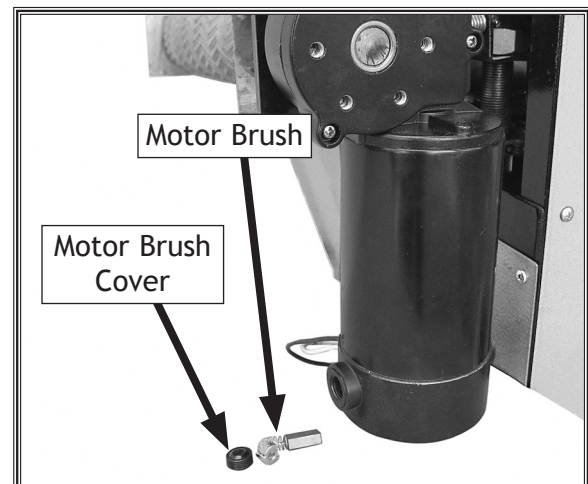


Figure 4. Motor brush components removed (one of two brushes shown).

Electrical Safety Instructions

These pages are current at the time of printing. However, in the spirit of improvement, we may make changes to the electrical systems of future machines. Study this diagram carefully. If you notice differences between your machine and these wiring diagrams, call Woodstock International Technical Support at (360) 734-3482.

WARNING

1. **SHOCK HAZARD.** Working on wiring that is connected to a power source is extremely dangerous. Touching electrified parts will result in personal injury including but not limited to severe burns, electrocution, or death. Disconnect the power from the machine before servicing electrical components!
2. **QUALIFIED ELECTRICIAN.** Due to the inherent hazards of electricity, only a qualified electrician should perform wiring tasks on this machine. If you are not a qualified electrician, get help from one before attempting any kind of wiring job.
3. **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.
4. **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.
5. **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.
6. **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.
7. **CAPACITORS/INVERTERS.** Some capacitors and power inverters store an electrical charge for up to five minutes after being disconnected from the power source. To avoid being shocked, wait at least this long before working on these components.
8. **ELECTRICAL REQUIREMENTS.** You **MUST** follow the electrical requirements at the beginning of this manual when connecting your machine to a power source.
9. **EXPERIENCING DIFFICULTIES.** If you are experiencing difficulties understanding the information included in this section, contact our Technical Support at (360) 734-3482.

NOTICE

The photos and diagrams included in this section are best viewed in color. You can view these pages in color at www.shopfox.biz.

WIRING DIAGRAM COLOR KEY

BLACK	BLUE	YELLOW	LIGHT BLUE
WHITE	BROWN	YELLOW GREEN	BLUE WHITE
GREEN	GRAY	PURPLE	WHITE
RED	ORANGE	PINK	TURQUOISE

Electrical Components

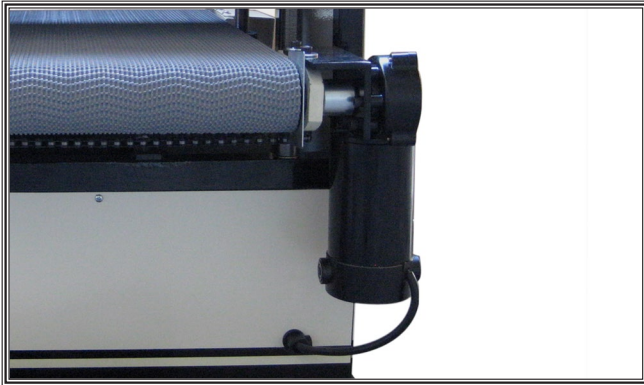


Figure 5. Feed motor.

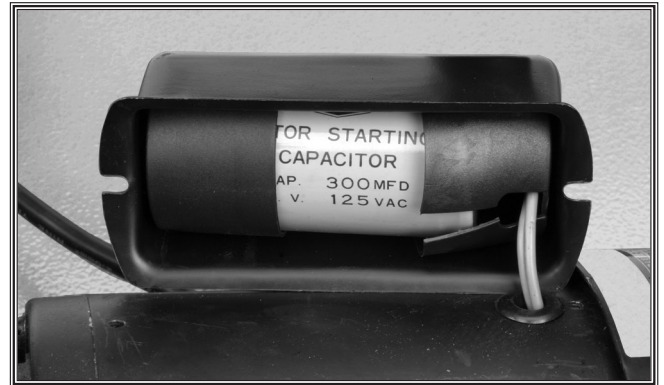


Figure 7. Capacitor.



Figure 6. Drum motor wiring.

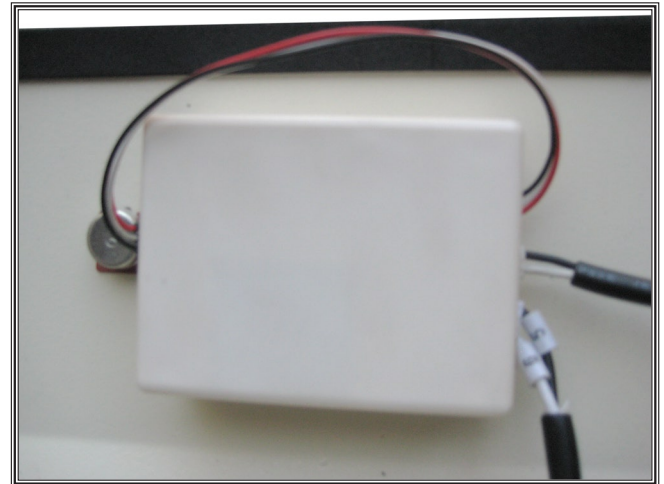


Figure 8. Variable speed control and circuit board.

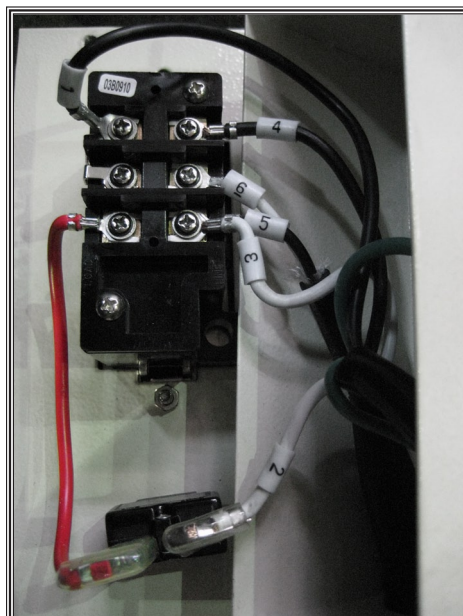
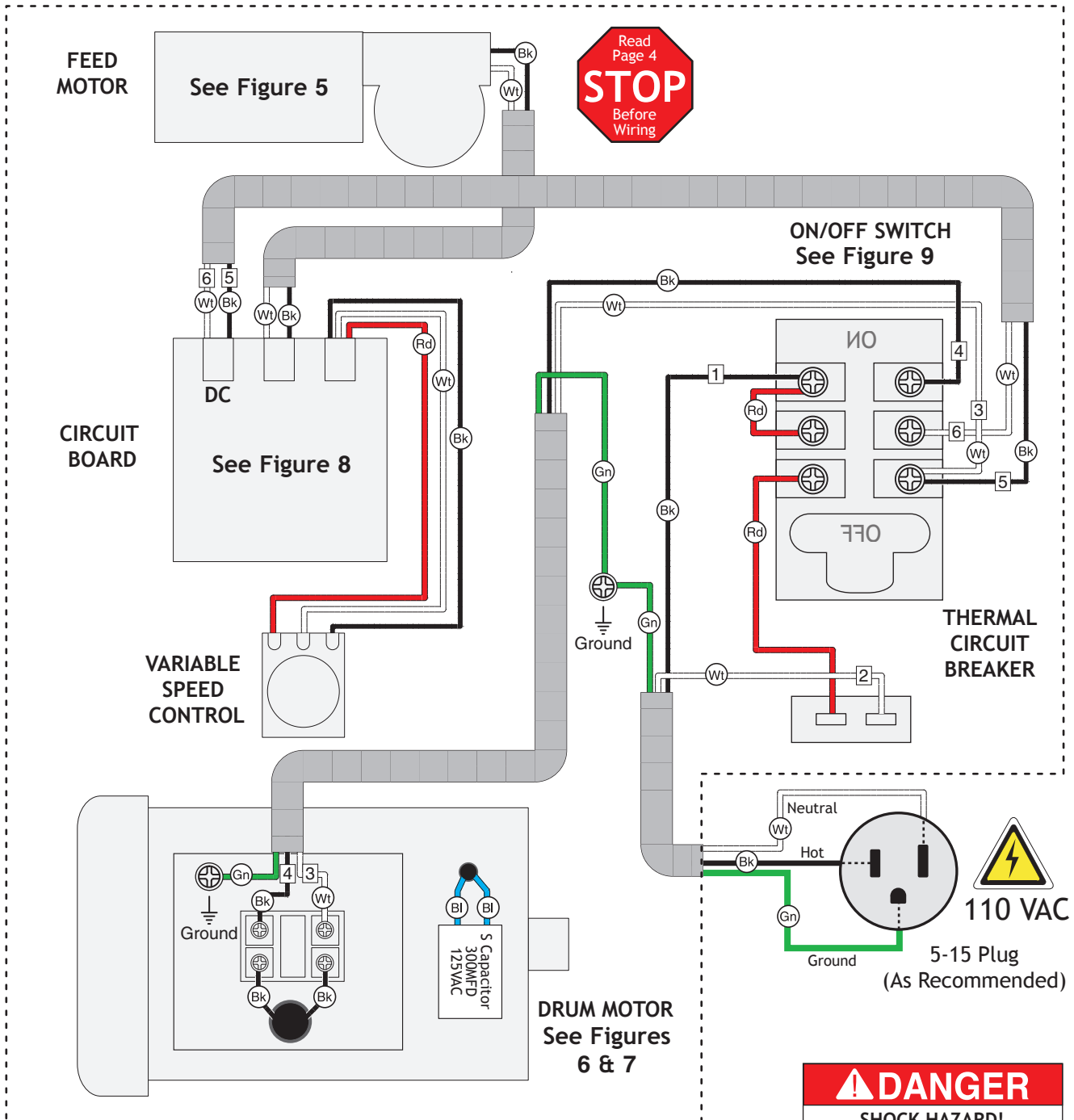


Figure 9. ON/OFF switch wiring.



Wiring Diagram

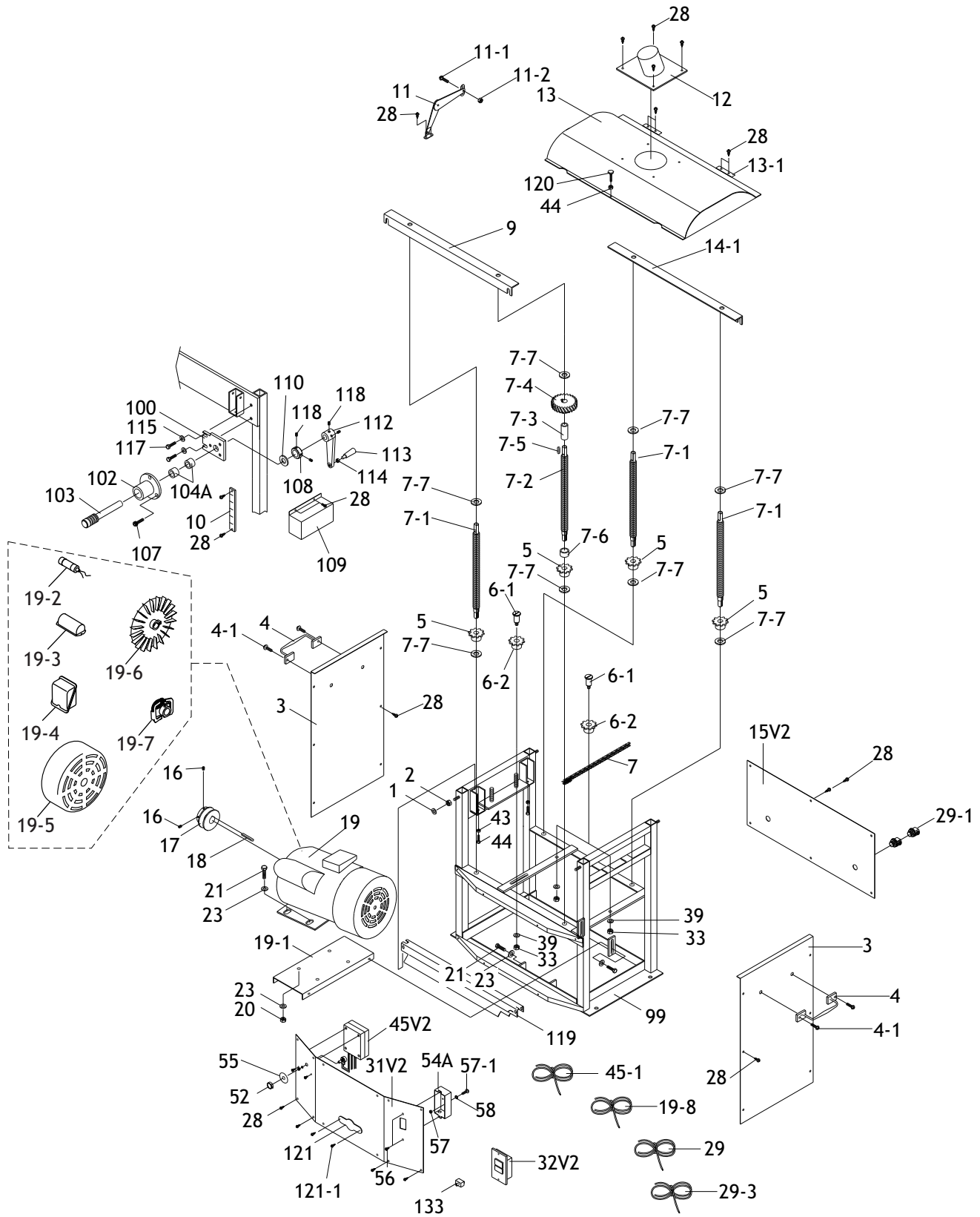


NOTICE

The motor wiring shown here is current at the time of printing, but it may not match your machine. Always use the wiring diagram inside the motor junction box.

PARTS

Frame (Revised 1/10)

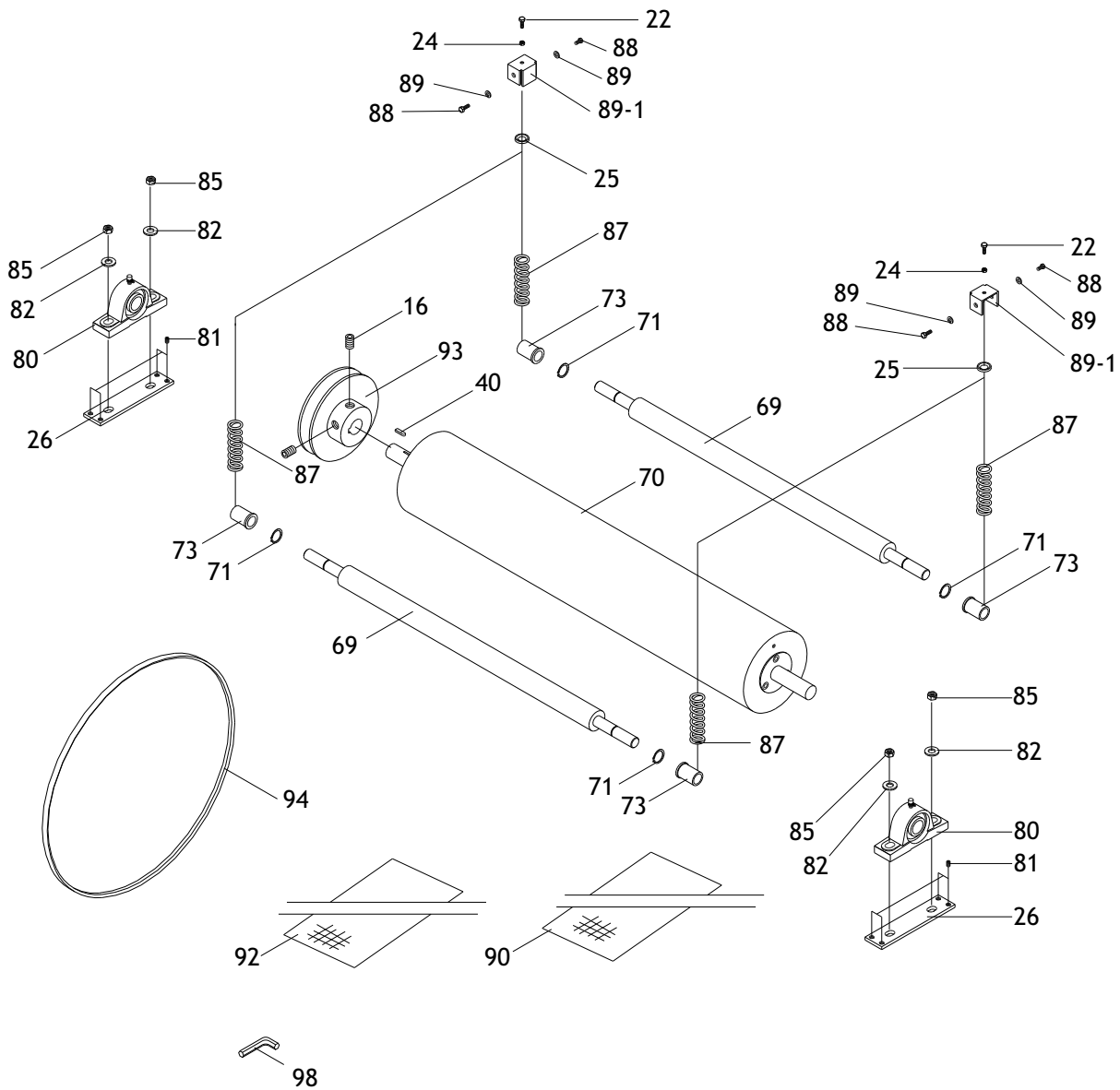


Frame Parts List

REF	PART #	DESCRIPTION
1	XPNO2	HEX NUT 5/16-18
2	XPW07	FLAT WASHER 5/16
3	X1740003	SIDE PANEL
4	X1740004	HANDLE
4-1	XPCAP09	CAP SCREW 5/16-18 X 5/8
5	X1740005	SPROCKET
6-1	X1740006-1	SPROCKET SHAFT
6-2	X1740006-2	SPROCKET
7	X1740007	ELEVATION CHAIN
7-1	X1740007-1	TABLE LIFT SCREW
7-2	X1740007-2	DRIVING TABLE LIFT SCREW
7-3	X1740007-3	BUSHING
7-4	X1740007-4	SIDE GEAR
7-5	XPK06M	KEY 5 X 5 X 10
7-6	X1740007-6	BRASS WASHER 1/2
7-7	XPW01	FLAT WASHER 1/2
9	X1740009	FRONT BRACE
10	X1740010	DEPTH SCALE
11	X1740011	RIGHT SUPPORT ARM
11-1	X1740011-1	PHLP HD SCREW 6-32 X 1/4
11-2	XPNO12	HEX NUT 6-32
12	X1740012	DUST PORT
13	X1740013	TOP COVER
13-1	X1740013-1	HINGE
14-1	X1740014-1	REAR BRACE
15V2	X1740015V2	REAR PANEL V2.01.10
16	XPSS03	SET SCREW 1/4-20 X 3/8
17	X1740017	MOTOR PULLEY
18	XPK110	KEY 1/4 X 1/4 X 1
19	X1740019	MOTOR 1.5 HP 110V
19-1	X1740019-1	MOTOR BRACKET
19-2	X1740019-2	S CAPACITOR 300M 125V 1-1/2 X 3-1/8
19-3	X1740019-3	CAPACITOR COVER
19-4	X1740019-4	MOTOR WIRING COVER
19-5	X1740019-5	FAN COVER
19-6	X1740019-6	MOTOR FAN
19-7	X1740019-7	CENTRIFUGAL SWITCH
19-8	X1740019-8	MOTOR CORD
20	XPNO2	HEX NUT 5/16-18
21	XPB07	HEX BOLT 5/16-18 X 3/4

REF	PART #	DESCRIPTION
23	XPW07	FLAT WASHER 5/16
28	XPHTEK7	TAP SCREW #8 X 3/8
29	X1740029	POWER CORD
29-1	X1740029-1	STRAIN RELIEF 1/2"
29-3	X1740029-3	CONTROL WIRE
31V2	X1740031V2	FRONT PANEL V2.01.10
32V2	X1740032V2	PUSH BUTTON SWITCH V2.01.10
33	XPNO2	HEX NUT 5/16-18
39	XPW07	FLAT WASHER 5/16
43	XPNO5	HEX NUT 1/4-20
44	XPB05	HEX BOLT 1/4-20 X 3/4
45V2	X1740045V2	PC BOARD CONSOLE UNIT V2.01.10
45-1	X1740045-1	VS POWER CORD
52	X1740052	VARIABLE SPEED CONTROL KNOB
54A	X1740054A	SWITCH BOX
55	X1740055	SPEED INDICATOR LABEL
56	XPFS03	FLANGE SCREW 10-24 X 3/8
57	XPNO7	HEX NUT 10-24
57-1	XPNO6	PHLP HD SCR 10-24 X 3/8
58	XPTLW02M	EXT TOOTH WASHER 5MM
99	X1740099	FRAME
100	X1740100	WORM GEAR SHAFT BRACKET
102	X1740102	SHAFT MOUNT
103	X1740103	PINION GEAR
104A	X1740104A	BUSHING
107	XPB19	HEX BOLT 1/4-20 X 1/2
108	X1740108	COLLAR
109	X1740109	GEAR COVER
110	X1740110	CRANK HANDLE WASHER 16MM
112	X1740112	CRANK HANDLE
113	X1740113	HANDLE
114	XPNO8	HEX NUT 3/8-16
115	XPW07	FLAT WASHER 5/16
117	XPB03	HEX BOLT 5/16-18 X 1
118	XPSS11	SET SCREW 1/4-20 X 1/4
119	X1740119	DUST SCOOP
120	X1740120	KNOB 1/4-20 X 1/2
121	D3375	SHOP FOX LOGO PLATE
121-1	XPHTEK12	TAP SCREW #5 X 3/8
133	X1740133	THERMAL CIRCUIT BREAKER

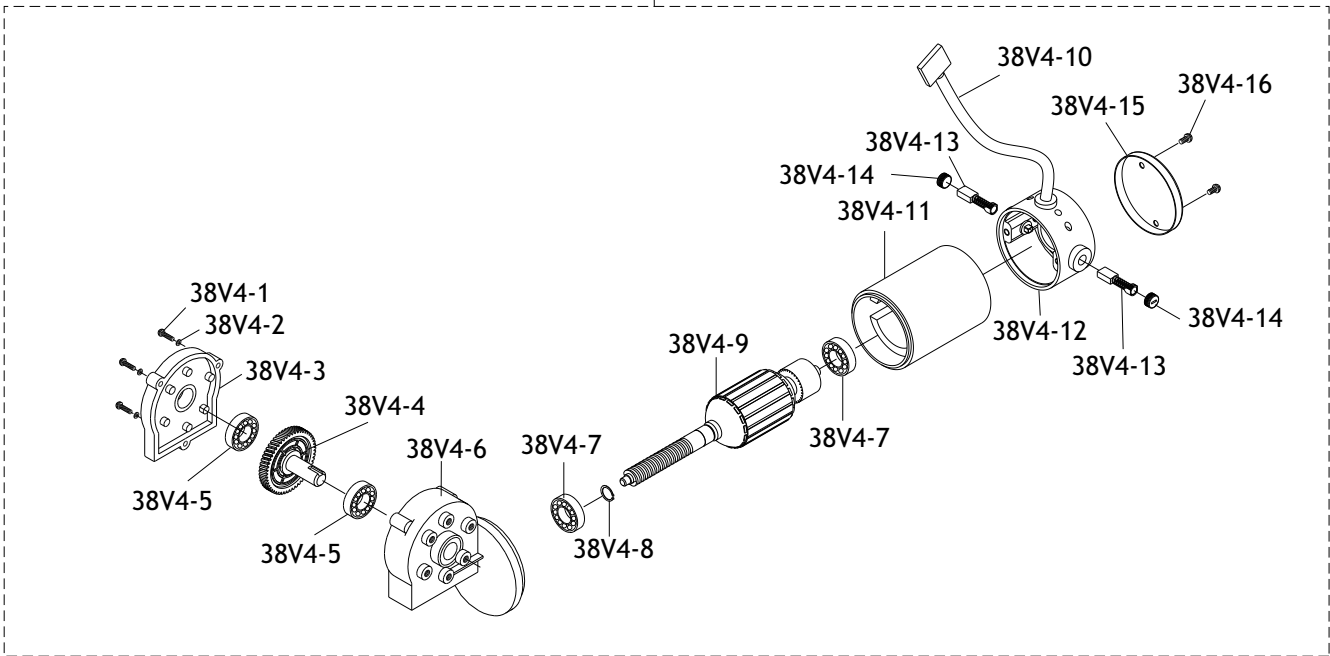
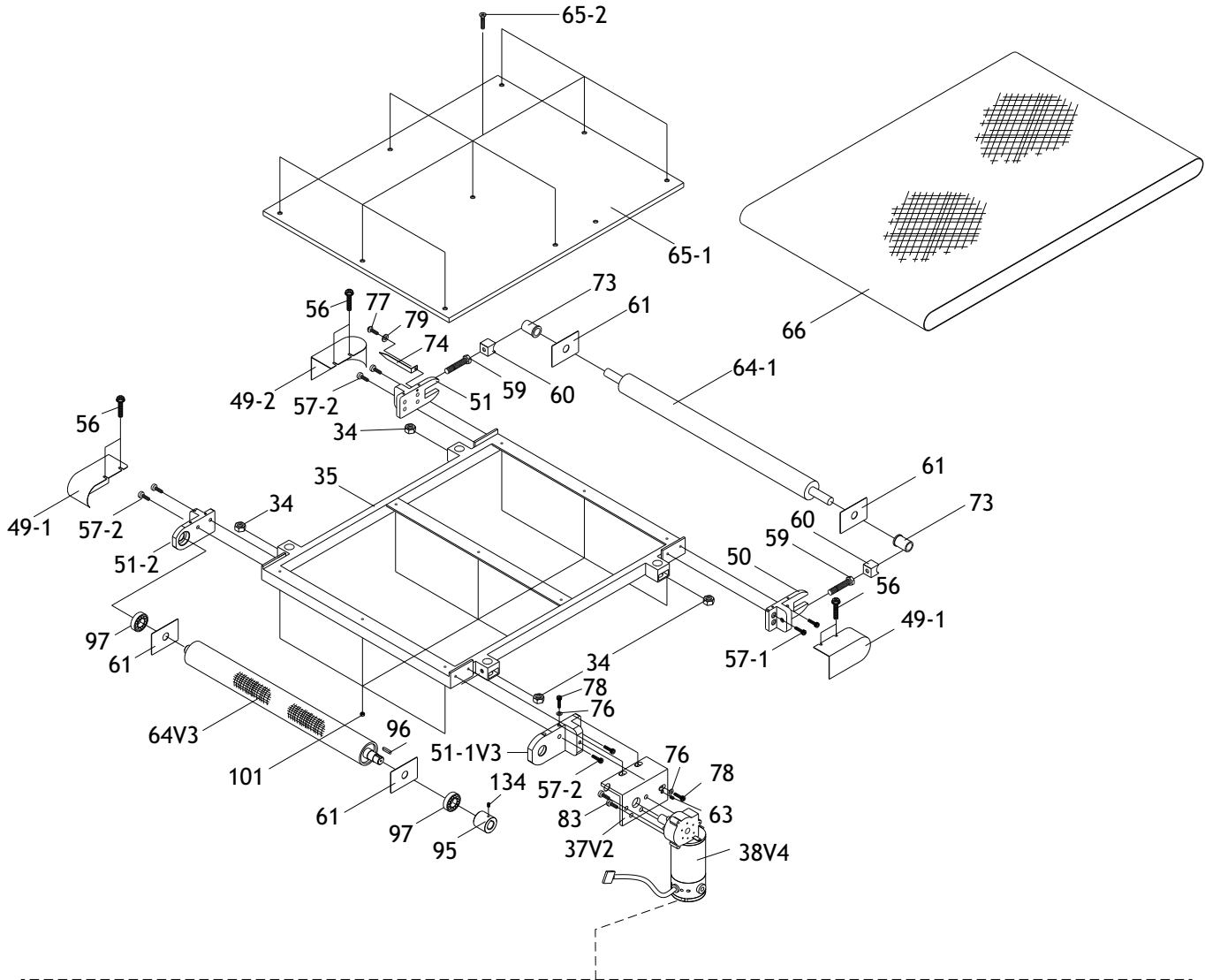
Drum



REF	PART #	DESCRIPTION
16	XPSS03	SET SCREW 1/4-20 X 3/8
22	XPB02	HEX BOLT 1/4-20 X 5/8
24	XPN05	HEX NUT 1/4-20
25	X1740025	SPRING PLATE
26	X1740026	ADJUST PLATE
40	XPK34M	KEY 5 X 5 X 20
69	X1740069	PRESSURE ROLLER
70	X1740070	SANDING DRUM
71	XPR08M	EXT RETAINING RING 19MM
73	X1740073	BUSHING
80	X1740080	PILLOW BLOCK BEARING
81	XPSS51	SET SCREW 5/16-24 X 1/2

REF	PART #	DESCRIPTION
82	XPW02	FLAT WASHER 3/8
85	XPLN01	LOCK NUT 3/8-16
87	X1740087	COMPRESSION SPRING
88	XPB51	HEX BOLT 1/4-20 X 3/8
89	XPW06	FLAT WASHER 1/4
89-1	X1740089-1	BRACKET
90	X1740090	HOOK & LOOP SANDBELT
92	X1740092	HOOK & LOOP DRUM COVER
93	X1740093	DRUM PULLEY
94	XPVA36	V-BELT A36
98	XPWA03M	HEX WRENCH 3MM

Conveyor



Conveyor Parts List

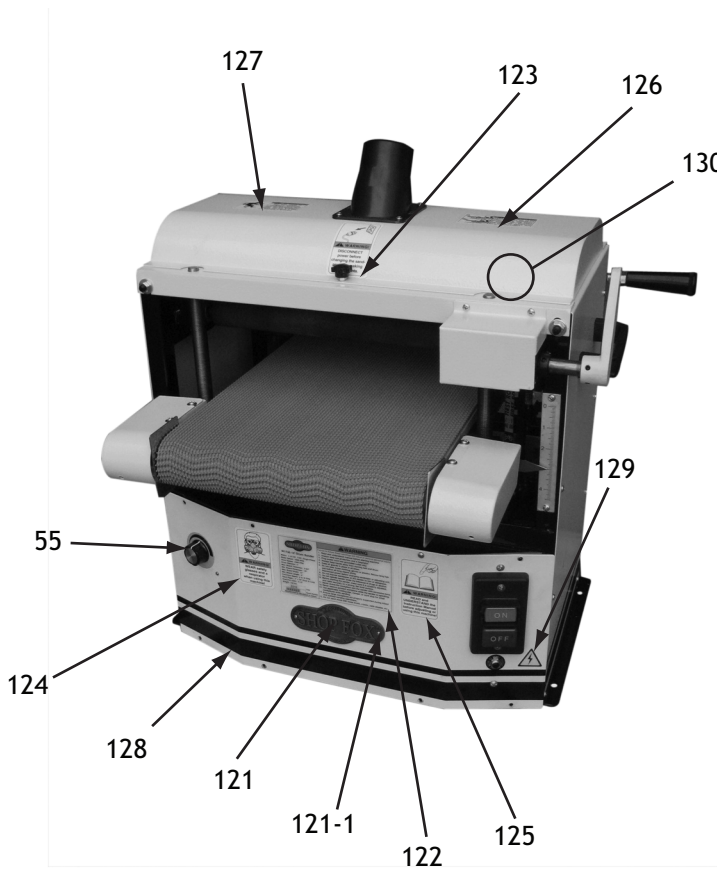
REF	PART #	DESCRIPTION
34	XPN03	HEX NUT 3/4-16
35	X1740035	TABLE FRAME
37V2	X1740037V2	CONVYR MOTOR PLATE V2.01.10
38V4	X1740038V4	DC FEED MOTOR 105W V4.01.10
38V4-1	XPS56M	PHLP HD SCR M4-.7 X 16
38V4-2	XPLW02M	LOCK WASHER 4MM
38V4-3	X1740038V4-3	END CASE V4.01.10
38V4-4	X1740038V4-4	DRIVE GEAR V4.01.10
38V4-5	XP6003ZZ	BALL BEARING 6003ZZ
38V4-6	X1740038V4-6	MAIN CASE V4.01.10
38V4-7	XP6000ZZ	BALL BEARING 6000ZZ
38V4-8	XPR06M	EXT RETAINING RING 16MM
38V4-9	X1740038V4-9	ARMATURE V4.01.10
38V4-10	X1740038V4-10	FEED MOTOR PWR CORD V4.01.10
38V4-11	X1740038V4-11	STATOR HOUSING V4.01.10
38V4-12	X1740038V4-12	MIDDLE CAP V4.01.10
38V4-13	X1740038V4-13	CARBON BRUSH V4.01.10
38V4-14	X1740038V4-14	PLASTIC LOCK SCREW V4.01.10
38V4-15	X1740038V4-15	END CAP V4.01.10
38V4-16	XPS19M	PHLP HD SCR M5-.8 X 6
49-1	X1740049-1	LEFT ROLLER END GUARD COVER
49-2	X1740049-2	RIGHT ROLLER END GUARD COVER
50	X1740050	LEFT FRONT ROLLER BRACKET
51	X1740051	RIGHT FRONT ROLLER BRACKET
51-1V3	X1740051-1V3	LFT REAR ROLLR BRCKT V3.01.10

REF	PART #	DESCRIPTION
51-2	X1740051-2	RIGHT REAR ROLLER BRACKET
56	XPFS03	FLANGE SCREW 10-24 X 3/8
57-1	XPS06	PHLP HD SCR 10-24 X 3/8
57-2	XPCAP06	CAP SCREW 1/4-20 X 1
59	X1740059	TENSION ADJUSTMENT BOLT
60	X1740060	BUSHING SUPPORT
61	X1740061	PLATE
63	XPSS11	SET SCREW 1/4-20 X 1/4
64V3	X1740064V3	DRIVE ROLLER V3.01.10
64-1	X1740064-1	IDLER ROLLER
65-1	X1740065-1	TABLE
65-2	XPFH12	FLAT HD SCR 1/4-20 X 1
66	X1740066	CONVEYOR BELT
73	X1740073	BUSHING
74	X1740074	SCALE POINTER
76	XPW06	FLAT WASHER 1/4
77	XPS06	PHLP HD SCR 10-24 X 3/8
78	XPCAP01	CAP SCREW 1/4-20 X 5/8
79	XPW03	FLAT WASHER #10
83	XPCAP28M	CAP SCREW M6-1 X 15
95	X1740095	BUSHING
96	XPK12M	KEY 5 X 5 X 30
97	XP6003-2RS	BALL BEARING 6003-2RS
101	XPLN02	LOCK NUT 1/4-20
134	XPSS11	SET SCREW 1/4-20 X 1/4

Label Placement

!WARNING

Safety labels warn about machine hazards and how to prevent machine damage or injury. The owner of this machine **MUST** maintain the original location and readability of all labels on this machine. If any label is removed or becomes unreadable, **REPLACE** that label before allowing the machine to enter service again. Contact Woodstock International, Inc. at (360) 734-3482 or www.shopfoxtools.com to order new labels.



REF	PART #	DESCRIPTION
55	X1740055	SPEED INDICATOR LABEL
121	D3375	SHOP FOX LOGO PLATE
121-1	XPHTK12	TAP SCREW #5 X 3/8
122	X1740122	ID LABEL
123	X1740123	DISCONNECT POWER LABEL
124	XLABEL-06	RESPIRATOR/GLASSES LABEL

REF	PART #	DESCRIPTION
125	XLABEL-08	READ MANUAL LABEL
126	XLABEL-13	CONVEYOR HAND PINCH LABEL
127	X1740127	SANDER KICKBACK LABEL
128	X1740128	TAPE BLACK/TAN TRIM
129	XLABEL-04	ELECTRICITY LABEL
130	XPPAINT-1	SF WHITE POWDER COATED PAINT

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INTRODUCTION

Woodstock Technical Support

We stand behind our machines! In the event that questions arise about your machine, parts are missing, or a defect is found, please contact Woodstock International Technical Support at (360) 734-3482 or send e-mail to: tech-support@shopfox.biz. Our knowledgeable staff will help you troubleshoot problems and send out parts for warranty claims.

If you need the latest edition of this manual, you can download it from <http://www.shopfox.biz>. If you still have questions after reading the latest manual, or if you have comments please contact us at:

Woodstock International, Inc.
Attn: Technical Support Department
P.O. Box 2309
Bellingham, WA 98227

About Your New 12" Drum sander

Your new **SHOP FOX®** 12" Drum Sander has been specially designed to provide many years of trouble-free service. Close attention to detail, ruggedly built parts and a rigid quality control program assure safe and reliable operation.

This 12" Drum sander has a stationary headstock with a variable speed conveyor table. The table height is manually controlled by a handcrank. The Model W1740 drum sander can be mounted to most sturdy workbenches or tool tables. A 1.5 HP motor drives the sanding drum, while a universal motor drives the conveyor feed rate.

Woodstock International, Inc. is committed to customer satisfaction in providing this manual. It is our intent to include all the information necessary for safety, ease of assembly, practical use and durability of this product.



Specifications

Sanding Motor	1.5 HP, 18A, 110V, 3450 RPM, Single-Phase
Conveyor Motor	Rheostat and Circuit Board Controlled Motor
Drum Speed	2300 FPM
Drum Diameter	4"
Maximum Workpiece Thickness.....	3 ³ / ₄ "
Minimum Workpiece Thickness	1 ¹ / ₈ "
Maximum Workpiece Width	12"
Minimum Workpiece Length.....	8"
Conveyor Speed.....	0 to 15 FPM
Sandpaper Size	3" Wide X 72" Long, Hook and Loop Style
Dust Port	2 ¹ / ₂ " OD
Handwheel Rotation-to-Table Travel	360°= 0.025"
Footprint	22 ¹ / ₄ " Wide x 13 ¹ / ₂ " Deep
Overall Width.....	27 ¹ / ₄ "
Overall Height.....	25 ⁷ / ₈ "
Overall Depth	24"
Machine Weight	149 lbs.

Controls and Features

Take the time to familiarize yourself with the controls of your new drum sander. They will be frequently mentioned throughout the instructions in this manual, and the better you know your machine, the better you can make it perform. **Figure 1** points out the key controls and their locations.

As with all precision machinery, adjustments to the drum sander require very close tolerances. The adjustments described in this section will be factory set. However, during the life of the machine it will necessary to make these adjustments yourself. Many of these adjustments require the use of an indicating tool such as a dial indicator or a Rotacator® to achieve accurate results.

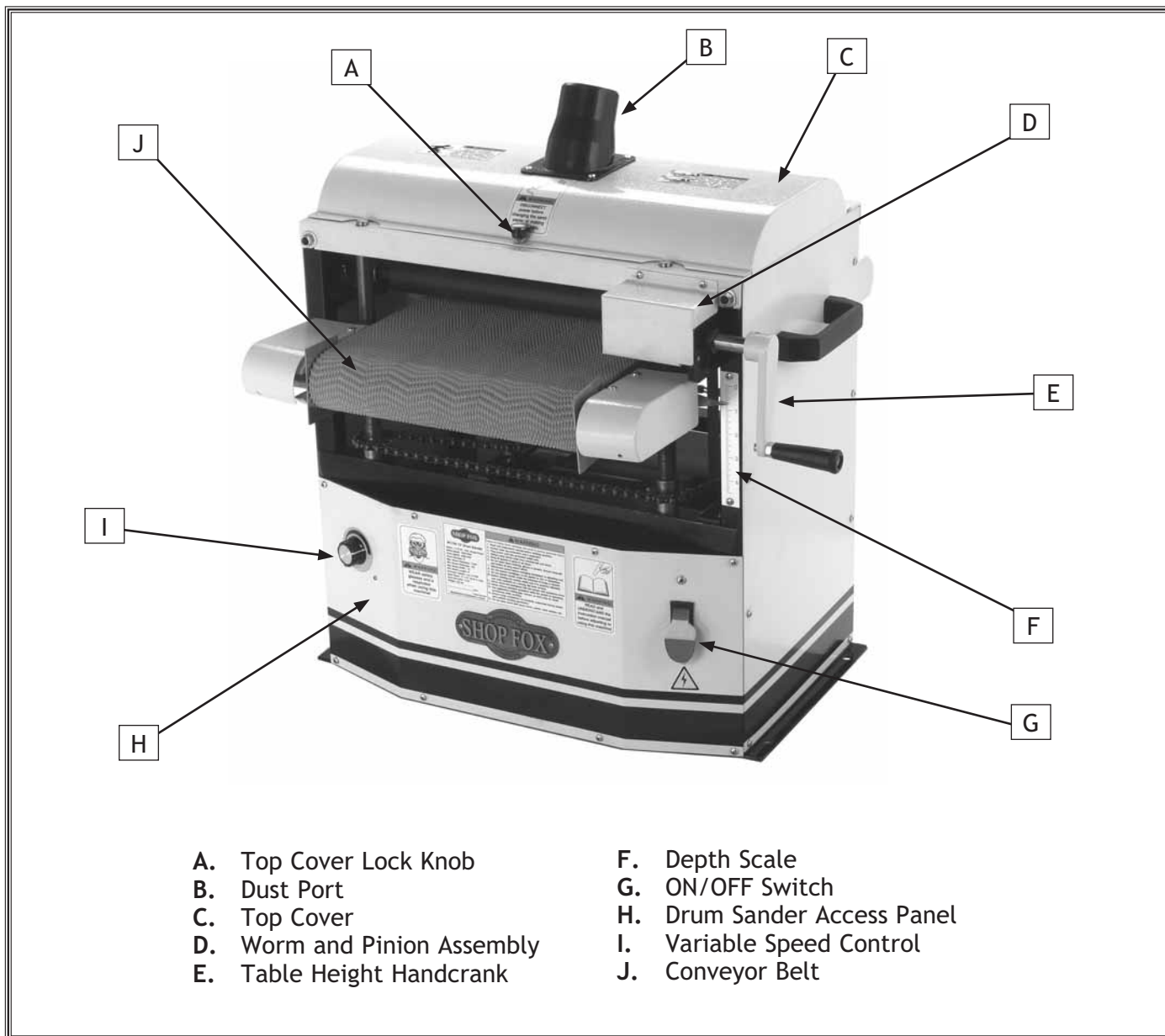


Figure 1. Controls and features.

SAFETY

**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.

NOTICE

This symbol is used to alert the user to useful information about proper operation of the equipment, and/or a situation that may cause damage to the machinery.


Standard Safety Instructions

1. **READ THROUGH THE ENTIRE MANUAL BEFORE STARTING MACHINERY.** Machinery presents serious injury hazards to untrained users.
2. **ALWAYS USE ANSI APPROVED SAFETY GLASSES WHEN OPERATING MACHINERY.** Everyday eye-glasses only have impact resistant lenses. They are **NOT** safety glasses.
3. **ALWAYS WEAR AN ANSI APPROVED RESPIRATOR WHEN OPERATING MACHINERY THAT PRODUCES DUST.** Wood dust is a carcinogen and can cause cancer and severe respiratory illnesses.
4. **ALWAYS USE HEARING PROTECTION WHEN OPERATING MACHINERY.** Machinery noise can cause permanent hearing damage.
5. **WEAR PROPER APPAREL.** **DO NOT** wear loose clothing, gloves, neckties, rings, or jewelry which may get caught in moving parts. Wear protective hair covering to contain long hair and wear non-slip footwear.
6. **NEVER OPERATE MACHINERY WHEN TIRED, OR UNDER THE INFLUENCE OF DRUGS OR ALCOHOL.** Be mentally alert at all times when running machinery.
7. **ONLY ALLOW TRAINED AND PROPERLY SUPERVISED PERSONNEL TO OPERATE MACHINERY.** Make sure operation instructions are safe and clearly understood.
8. **KEEP CHILDREN AND VISITORS AWAY.** Keep all children and visitors a safe distance from the work area.
9. **MAKE WORKSHOP CHILD PROOF.** Use padlocks, master switches, and remove start switch keys.

10. **NEVER LEAVE WHEN MACHINE IS RUNNING.** Turn power **OFF** and allow all moving parts to come to a complete stop before leaving machine unattended.
11. **DO NOT USE IN DANGEROUS ENVIRONMENTS.** DO NOT use machinery in damp, wet locations, or where any flammable or noxious fumes may exist.
12. **KEEP WORK AREA CLEAN AND WELL LIT.** Clutter and dark shadows may cause accidents.
13. **USE A GROUNDED EXTENSION CORD RATED FOR THE MACHINE AMPERAGE.** Undersized cords overheat and lose power. Replace extension cords if they become damaged. DO NOT use extension cords for 220V machinery.
14. **ALWAYS DISCONNECT FROM POWER SOURCE BEFORE SERVICING MACHINERY.** Make sure switch is in OFF position before reconnecting.
15. **MAINTAIN MACHINERY WITH CARE.** Keep blades sharp and clean for best and safest performance. Follow instructions for lubricating and changing accessories.
16. **MAKE SURE GUARDS ARE IN PLACE AND WORK CORRECTLY BEFORE USING MACHINERY.**
17. **REMOVE ADJUSTING KEYS AND WRENCHES.** Make a habit of checking for keys and adjusting wrenches before turning machinery **ON**.
18. **CHECK FOR DAMAGED PARTS BEFORE USING MACHINERY.** Check for binding and alignment of parts, broken parts, part mounting, loose bolts, and any other conditions that may affect machine operation. Repair or replace damaged parts.
19. **USE RECOMMENDED ACCESSORIES.** Refer to the instruction manual for recommended accessories. The use of improper accessories may cause risk of injury.
20. **DO NOT FORCE MACHINERY.** Work at the speed for which the machine or accessory was designed.
21. **SECURE WORKPIECE.** Use clamps or a vise to hold the workpiece when practical. A secured workpiece protects your hands and frees both hands to operate the machine.
22. **DO NOT OVERREACH.** Keep proper footing and balance at all times.
23. **MANY MACHINES WILL EJECT THE WORKPIECE TOWARD THE OPERATOR.** Know and avoid conditions that cause the workpiece to "kickback."
24. **ALWAYS LOCK MOBILE BASES (IF USED) BEFORE OPERATING MACHINERY.**
25. **WORKPLACE SAFETY.** Always wear an approved respirator when using this machine. Sanding dust can cause permanent respiratory injuries.

Additional Safety Instructions for Sanders

SAFETY



⚠️ WARNING
 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!

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

1. **INSTRUCTION MANUAL.** This machine presents significant safety hazards to untrained users. Read/ understand this entire manual before starting the drum sander.
2. **REACHING INSIDE DRUM SANDER.** Never reach inside drum sander or remove covers when the drum sander is connected to power, and always stop the drum sander and disconnect power before removing jammed workpieces.
3. **INFEED SAFETY.** The conveyor is designed to pull material into the sanding drum. Always keep hands, clothing, and long hair away from the conveyor during operation to prevent serious injury.
4. **BODY POSITION WHILE OPERATING.** The workpiece may kick out during operation. To avoid getting hit, stand to the side of the drum sander during the entire operation.
5. **SANDING CORRECT MATERIAL.** Only sand natural wood stock with this drum sander. **DO NOT** sand MDF, plywood, laminates, or other synthetic products.
6. **GRAIN DIRECTION.** Sanding across the grain is hard on the drum sander and may cause the workpiece to kick out. Always sand in the same direction or at a slight angle with the wood grain.
7. **LOOKING INSIDE DRUM SANDER.** Wood chips fly around inside the drum sander at a high rate of speed. **DO NOT** look inside the drum sander or remove guards/covers during operation.
8. **CUTTING LIMITATIONS.** The drum sander may kick out a workpiece at the operator or be damaged if pushed beyond sanding limits.
9. **CLEAN STOCK.** Sanding stock with nails, staples, or loose knots *MAY* cause debris to kick out at the operator and *WILL* damage the sanding drum. Always thoroughly inspect and prepare stock to avoid these hazards.
10. **UNPLUGGING DURING ADJUSTMENTS.** When connected to power, the drum sander can be accidentally turned *ON*. Always disconnect power when servicing or adjusting the components of the drum sander.

ELECTRICAL

110V Operation

The **SHOP FOX®** Model W1740 operates at 110 volts. Use a NEMA-style 5-20 plug and receptacle (**Figure 2**) to connect your machine to power.

The motor supplied with your new 12" Drum sander is rated at 1.5 HP and will draw approximately 18 amps.

We recommend connecting this machine to a dedicated circuit with a verified ground, using a 20 amp circuit breaker. Never replace a circuit breaker with one of higher amperage without consulting a qualified electrician to ensure compliance with wiring codes. Otherwise you may overload the wire and plugs in the circuit.

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 equipment. Instead, arrange the placement of your machinery and installed wiring to eliminate the need for extension cords. If you must use an extension cord, please use the following guidelines:

- Use cords rated for Standard Service
- Never exceed a length of 50 feet
- Use cords with 12 ga. wire or bigger
- Ensure cord has a ground wire and pin
- Do not use cords in need of repair

Grounding

This machine must be grounded! If your power supply receptacle does not accommodate a ground pin, have the receptacle replaced by a qualified electrician or have an appropriate adapter installed and grounded properly. An adapter with a grounding wire does not guarantee the machine will be grounded. A ground source must be verified.

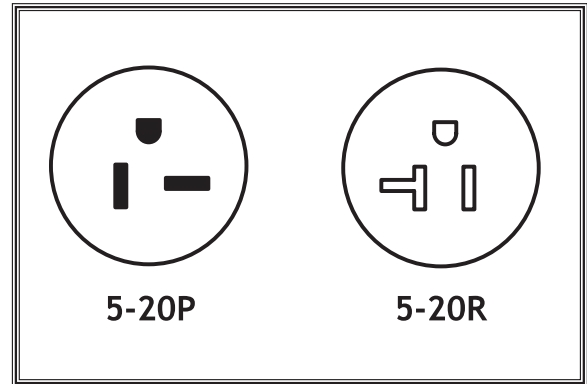



Figure 2. Typical 110V 20A 3-prong plug and outlet.

WARNING

This equipment 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 12 AWG copper grounding wire from the outlet to a known ground. Under no circumstances should the grounding pin be removed from any three-pronged plug or serious injury may occur.

SET UP

Unpacking



! CAUTION

Get lifting assistance before starting assembly. The Model W1740 Drum Sander is a heavy load, DO NOT attempt to lift it without help!

The SHOP FOX® Model W1740 has been carefully packaged for safe transporting. If you notice the machine has been damaged, please contact your authorized SHOP FOX® dealer immediately.

Inventory

The following is a description of the main components shipped with the SHOP FOX® Model W1740. Lay the components out to inventory them.

Note: Some parts and hardware may already be installed on the machine. Make sure to check the machine when you use this inventory list.

Box Inventory (Figure 3)	Qty
A. Drum Sander.....	1
B. Dust Port and Screws	1
C. Hex Wrench (3mm)	1
D. Handcrank	1

If any parts are missing, examine the packaging for the missing parts. For any missing parts, find the part number in the back of this manual and contact Woodstock International, Inc. at (360) 734-3482 or at tech-support@shopfox.biz



! WARNING

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

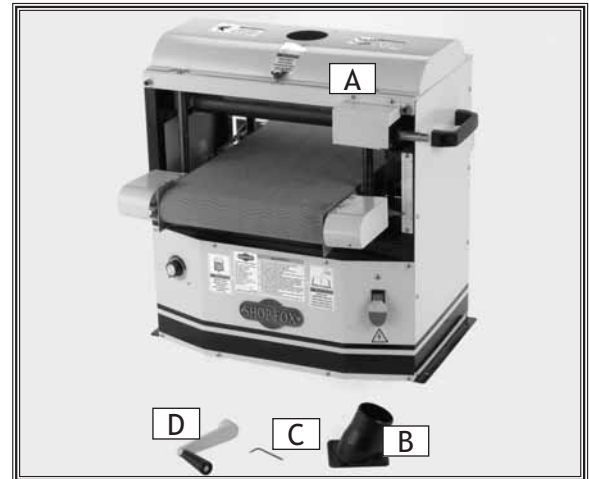


Figure 3. Inventory.

SET UP

Machine Placement

- **Floor Load:** This machine distributes a heavy load in a small footprint. Some work benches may require additional bracing to support both the machine and a workpiece.
- **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 drum 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.

Cleaning Machine

When cleaning the unpainted metal parts of your machine, 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. Always relubricate bare metal parts with a rust inhibiting oil.

	<p>⚠ CAUTION Get lifting assistance before starting assembly. The Model W1740 Drum Sander is a heavy load. DO NOT attempt to lift it without help!</p>
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	<p>⚠ CAUTION 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.</p>
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	<p>⚠ WARNING NEVER use gasoline or other petroleum-based solvents to clean with. 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!</p>
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	<p>⚠ CAUTION ALWAYS work in well-ventilated 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.</p>
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SET UP

Sander Installation

Mount the sander on a sturdy workbench or on a strong tool table. Make sure that the location will allow for easy dust collection connection and unobstructed sander maintenance and service.

To install the drum sander, do these steps:

1. Place the sander on a bench top capable of holding approximately 150 lbs. plus the weight of the workpiece. Make sure the surface is flat and stable.
2. Drill four 1/4" holes on the bench, using the holes in the base as a guide.
3. Using a 1/2" wrench, bolt the base to the bench top with 5/16" lag bolts and flat washers as shown in **Figure 4**.



Figure 4. Sander installation.

Handcrank Installation

The handcrank is installed on the front right lead screw shaft, and is held in place with two set screws already threaded into the handle.

To mount the handcrank, do these steps:

1. Place the handcrank over the shaft shown in **Figure 5** and, using a 3mm hex wrench, secure the handle with the two set screws.

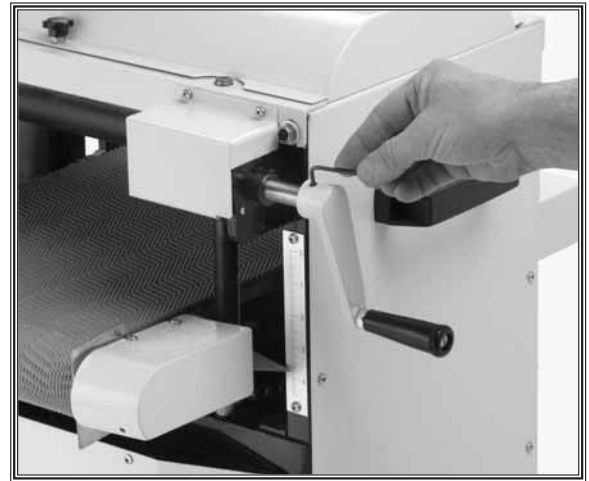


Figure 5. Handcrank installation.

Dust Port Installation

This drum sander requires approximately 300 CFM AT THE DUST PORT.

Note: A fine layer of dust will always be present on your workpiece as it comes out of the sander. This is normal.

To install the dust port, do these steps:

1. Remove the four Phillips head screws at the dust port hole.
2. Place the 2 1/2" dust port over the top cover mounting holes and secure with the Phillips head screws removed in **Step 1** as shown in **Figure 6**.
3. Attach a 2 1/2" dust collection hose to the dust port and secure it with a hose clamp.

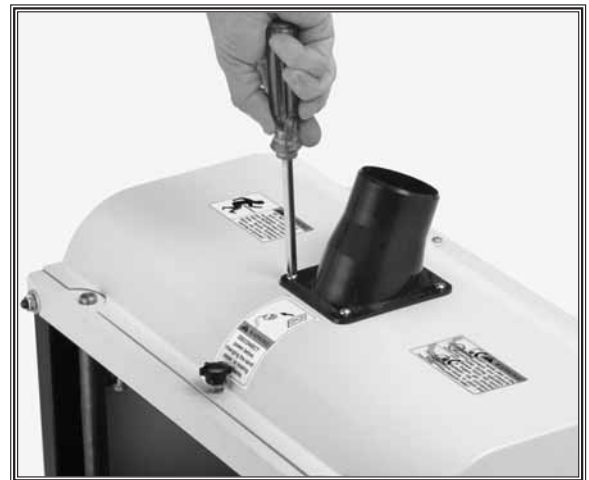


Figure 6. Dust port installation.

SET UP

Test Run

It is important to perform a test run to make sure all the controls are working properly.

To test run the sander, do these steps:

1. Put on safety glasses and make sure any bystanders are out of the way and also wearing safety glasses.
2. Make sure that the drum and conveyor are not touching, and the conveyor is free and clear of all tools.
3. Connect the sander to the power source.
4. With your finger poised over the ON/OFF switch in case there is a problem, turn the drum sander **ON**.

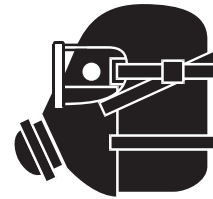
The drum sander should run smoothly, with little or no vibration or rubbing noises. Strange or unnatural noises should be investigated and corrected before operating the machine further. To avoid injury or damage to the machine, **DO NOT** attempt to make adjustments to the machine without turning it **OFF** and unplugging it from its power source.

Investigate and correct any problems before operating the machine further. If you need help, refer to the **Troubleshooting** section in the back of this manual or

WARNING

Before starting the sander, make sure you have performed the preceding assembly and adjustment instructions, and you have read through the rest of the manual and are familiar with the various functions and safety issues associated with this machine. Failure to follow this warning could result in serious personal injury or even death!

WARNING



Always wear safety glasses and a respirator when operating the drum sander. Failure to comply with this warning may result in serious personal injury.

OPERATIONS

General

The Model W1740 will perform many types of sanding operations that are beyond the scope of this manual. Many of these sanding operations can be dangerous or deadly if performed incorrectly.

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, stop using the machine!**

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

! WARNING

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. Ensure safety and read this manual!

! WARNING

DO NOT investigate problems or adjust the drum sander while it is running. Wait until the machine is turned off, unplugged and all working parts have come to a complete stop before proceeding!

OPERATIONS

Depth of Cut

The handcrank operates a chain drive system that raises and lowers the table. For every rotation of the handcrank the conveyor table moves 0.025". Depending on the type of wood, width of wood, feed rate, and grit of sandpaper; your sanding depth should not exceed more than a quarter of a turn of the handcrank.

For the first pass, always adjust the table height so the sandpaper will only make a honing pass to get rid of any potential high spots.

Repeat once or twice without adjusting the table height. Turn the stock 180° between passes to ensure an even cut.

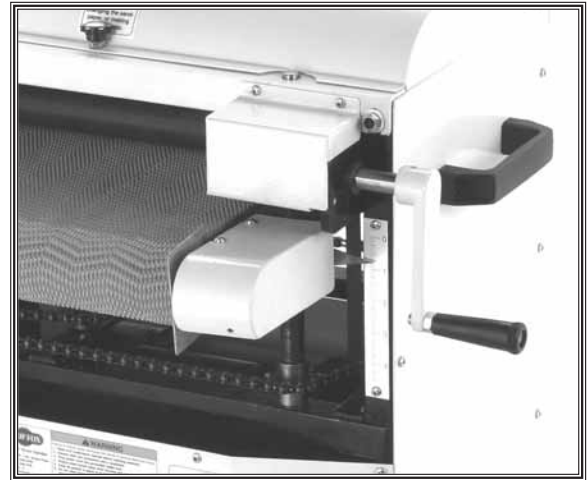


Figure 7. Handcrank location.

NOTICE

DO NOT VOID MACHINE WARRANTY! Do not overload the drum sander motor. If the motor is overloaded, it will noticeably lose RPM, then the start capacitor will engage, overheat, and burn out.

Feed Rate

The Model W1740 features a variable feed rate dial shown in **Figure 8** which works with the computer board to vary the conveyor motor feed rate. As a general rule, the faster feed rate will dimension lumber quicker but leave a rougher finish; the slower feed rate will leave a smoother finish. A small amount of trial-and-error will be the best way to determine which setting is right for your particular sanding task.



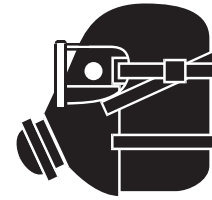
Figure 8. Feed rate dial.

Sanding

⚠️ WARNING

DO NOT sand more than one board at a time. Minor variations in thickness can cause one board to be propelled by the rapidly spinning sanding drum and ejected from the machine. NEVER stand directly in front of the infeed area of the sander, ALWAYS stand out of the way of potential workpiece kickback.

⚠️ WARNING



Always wear safety glasses and a respirator when operating the drum sander. Failure to comply with this warning may result in serious personal injury.

To sand a workpiece, do these steps:

1. Adjust the table height so the sandpaper will only make a honing pass to get rid of any potential high spots.
2. Start the dust collector, turn the sander **ON**, and start the conveyor.
3. While standing at the side (not at the infeed or outfeed end) feed the workpiece through the sander, and retrieve it from the other side.
4. Raise the table to the required sanding depth and feed the workpiece through the sander.
5. Repeat once or twice without adjusting the table height. Turn the stock 180° between passes to ensure an even cut.

Sanding Tips

- Replace the sandpaper with a higher grit to achieve a finer finish.
- Raise the table with a maximum of 1/4" turn of the handcrank until the workpiece is the desired thickness.
- Reduce snipe when sanding more than one board of the same thickness by feeding them into the sander with the front end of the second board touching the back end of the first board.
- Feed boards into the sander at different points on the conveyor to maximize sandpaper life and prevent uneven conveyor belt wear.
- DO NOT sand boards less than 8" long or less than 1/8" thick to prevent damage to the workpiece and the drum sander.

- Carefully inspect any lumber that you plan to run through the drum sander. Each board must have at least one flat surface to slide along the conveyor table. To create a flat surface, pass the stock over a jointer first (see **Figure 9**). Some defects such as moderate twisting, loose knots or severe cracks may make the stock unsandable with the drum sander.
- Only use clean stock (see **Figure 10**). Scrape off all glue from joined boards before sanding. Remove all dirt, nails, staples, imbedded gravel, etc. from any lumber you plan on using. A hidden nail in a workpiece will instantly tear the sandpaper and the hook and loop drum cover.
- Never sand end grain, or the sandpaper can grab the wood and cause a kickback or stall the motor.
- Keep your work area clear. Always make sure that long workpieces are supported and have enough room to exit the drum sander.
- Avoid sanding wood with more than 20% moisture content. Wood that has been exposed to rain or snow will sand poorly, damage sandpaper, and overload the motor.
- Extend the life of the sandpaper by regularly using a PRO-STIK® sanding pad.
- When sanding workpieces with irregular surfaces, such as cabinet doors, take very light sanding passes to prevent gouges. When the drum moves from sanding a wide surface to sanding a narrow surface, the load on the motor will be reduced, and the drum will speed up, causing a gouge.
- DO NOT edge sand boards. This can cause boards to kickback, causing serious personal injury. Edge sanding boards also can cause damage to the conveyor belt and sandpaper.
- When sanding workpieces with a bow or crown, place the high point up to prevent the workpiece from rocking.
- Feed the workpiece at an angle to maximize stock removal and sandpaper effectiveness, but feed the workpiece straight to reduce sandpaper grit scratches for the finish passes.

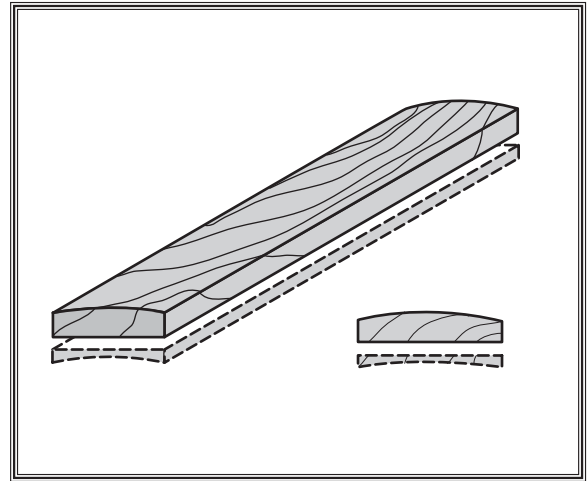


Figure 9. Cupped board corrected.

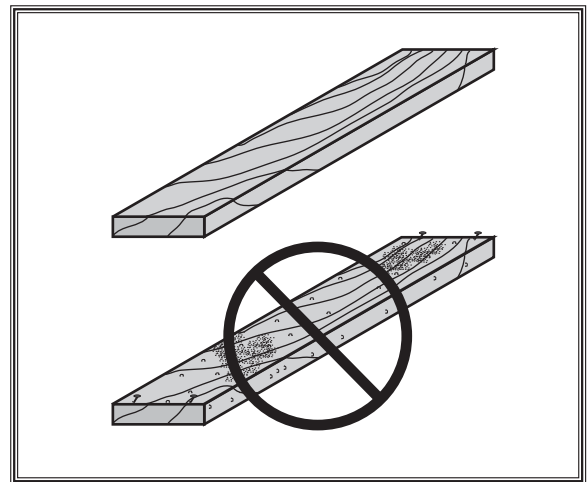


Figure 10. Good and poor lumber.

Sandpaper Selection

We recommend Aluminum Oxide for general workshop environments. Below is a chart that groups abrasives into different classes, and shows which grits fall into each class. The general rule is to sand a workpiece with progressively higher grit sandpaper, with no one grit increase of more than 50. Avoid skipping grits; the larger the grit increase, the harder it will be to remove the scratches from the previous grit. Ultimately, the type of wood you use and your stage of finish will determine the best grit types to install on your sander.

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 sander marks and initial finish sanding.
120-180	Fine	Finish sanding.

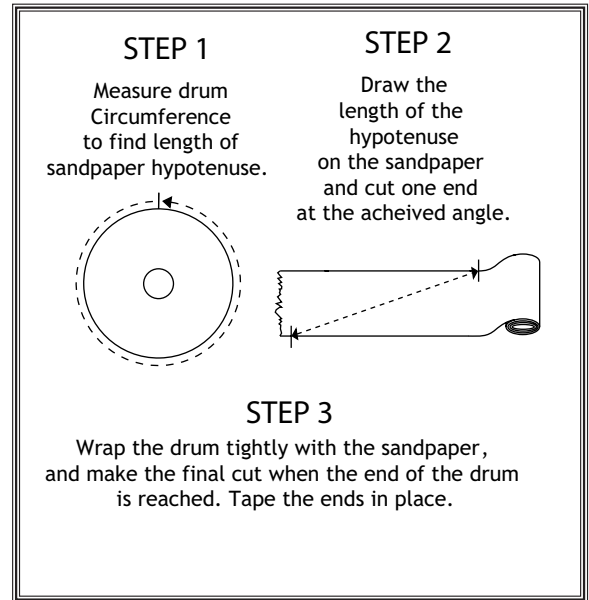


Figure 11. Procedure for finding the angle of cut for wider or narrower sandpaper for any size sanding drum.

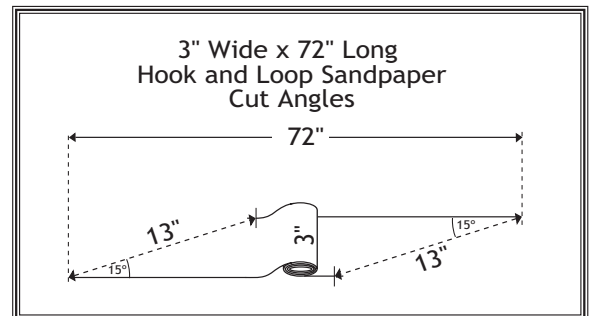


Figure 12. 3" wide x 72" long hook-and-loop sandpaper cut at a 15°.

OPERATIONS

Sandpaper Replacement

The Model W1740 is designed for 3" wide x 72" long hook-and-loop sandpaper cut at a 15° (see Figure 12). To use other widths of sandpaper, use the formula in Figure 11 to find the angle to cut the sandpaper.

To change sandpaper, do these steps:

1. DISCONNECT SANDER FROM POWER SOURCE!
2. Open the top cover to expose the drum.
3. Unwind the old sandpaper and notice the direction that it was wrapped around the drum.
4. Use the old sandpaper as a pattern to cut out the new sandpaper, or use the three steps in Figure 11, to cut a different width sandpaper.
5. Wrap the sanding drum with the new sandpaper. Make sure to wrap the sandpaper tight and try to keep the gaps to a minimum.
6. Tape both ends with 3/4" strapping tape (Figure 13), making at least two complete passes so that the second layer is directly on top of the first.



Figure 13. Sandpaper installed and taped.

MAINTENANCE

General

WARNING

Failure to routinely inspect your drum sander for damage and wear could result in unsatisfactory work results, premature component or machinery failure, or operator injury. We recommend you create a checklist for routine inspection and maintenance. Remember to always disconnect the drum sander from its power source before attempting to inspect, adjust, or repair this machine!

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

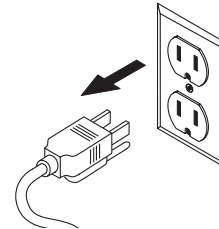
Daily Check:

- Loose mounting bolts.
- Worn switch.
- Worn or damaged cords or plugs.
- Damaged V-belt.
- Any other unsafe condition.

Cleaning

Cleaning the Model W1740 is relatively easy. From time to time, vacuum wood dust off of the internal components, especially the motor.

WARNING



MAKE SURE that your machine is unplugged during all maintenance procedures! If this warning is ignored, serious personal injury may occur.

Lubrication

The chain should be lubricated periodically with a light machine oil. Use only lubrication as needed. Too much lubricant will attract dirt and sawdust and will clog the chain mechanism. Motor bearings need no lubrication.

Lubricate in these locations:

- **Pillow Block Bearings:** Must be lubricated every 20 hours of operation. Use two pumps of a high-quality, lithium-based grease. A grease fitting (Figure 14) is located on the top of each pillow block bearing.
- **Lead Screws:** Lightly lubricate the four lead screws (Figure 15) once a month with general purpose grease.
- **Drive Chain:** Inspect and lubricate the drive chain with oil (Figure 15) monthly. Check the sprockets, the chain, and the master links during inspection.
- **Side gear:** Lubricate the worm and pinion gear with general purpose grease every six months. The dust cover will need to be removed for worm and pinion gear lubrication (see Figure 16).

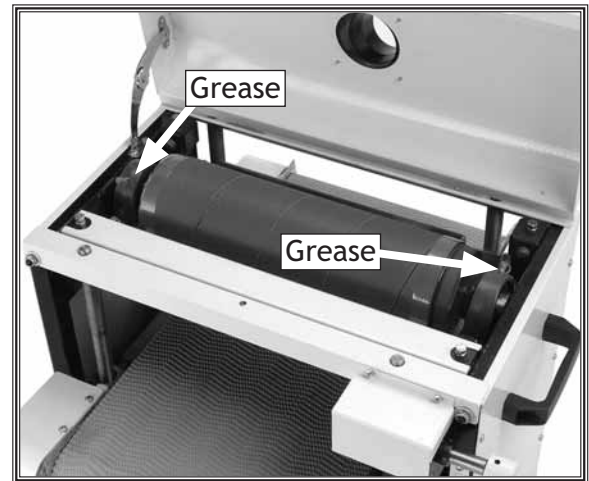


Figure 14. Pillow bearing lubrication.

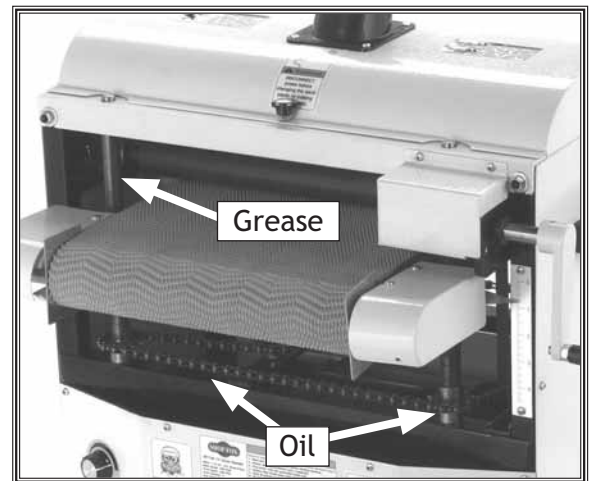


Figure 15. Sprocket, lead screw, and chain lubrication.

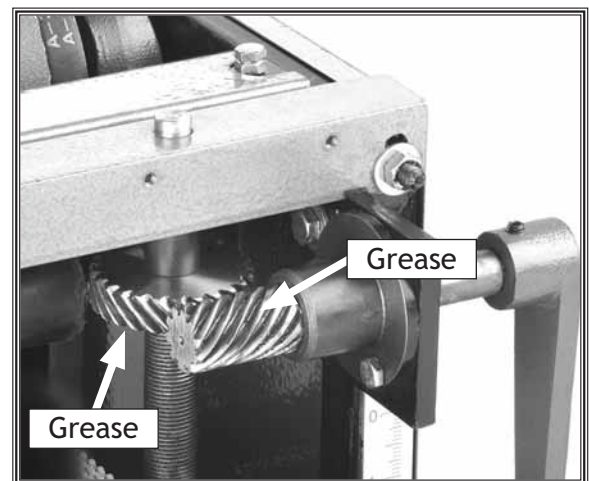


Figure 16. Side gear lubrication.

SERVICE

General

Regular periodic maintenance on your SHOP FOX® Model W1740 will ensure its optimum performance. Make a habit of inspecting your machine each time you use it.

Check for the following conditions and repair or replace when necessary:

- Loose mounting bolts.
- Worn switch.
- Worn or damaged cord and plugs.
- Damaged V-belt.
- Any other condition that could hamper the safe operation of this machine.

V-Belt Service

A new V-belt can stretch and loosen during the first 16 hours of use. Check and re-tension belt if it is loose. Proper tension is important for optimum power transfer. However, too much tension may cause premature bearing failure.

To check V-belt tension, do these steps:

1. DISCONNECT POWER TO THE SANDER!
2. Remove the right handle and side panel.
3. Using a straightedge and ruler (Figure 17), push on the middle of the V-belt. The correct V-belt tension is achieved when the V-belt can be deflected $1/2$ "- $3/4$ " with moderate pressure.
4. Reinstall the side panel and handle.

To adjust/replace V-belt tension, do these steps:

1. DISCONNECT POWER TO THE SANDER!
2. Open the rear panel.
3. Loosen the motor mount bolts and raise or lower the motor bracket, as shown in Figure 18 to replace, check, or adjust the belt tension.
4. Tighten the motor mount bolts, and reinstall the panel.

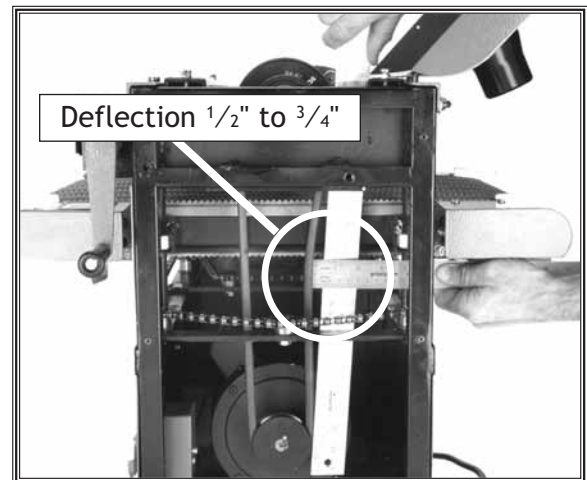
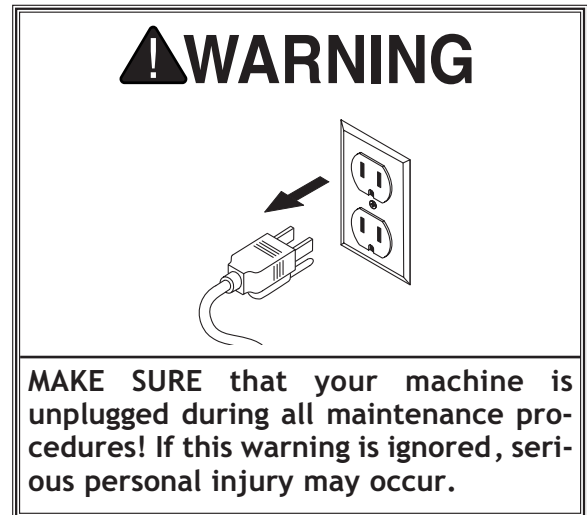
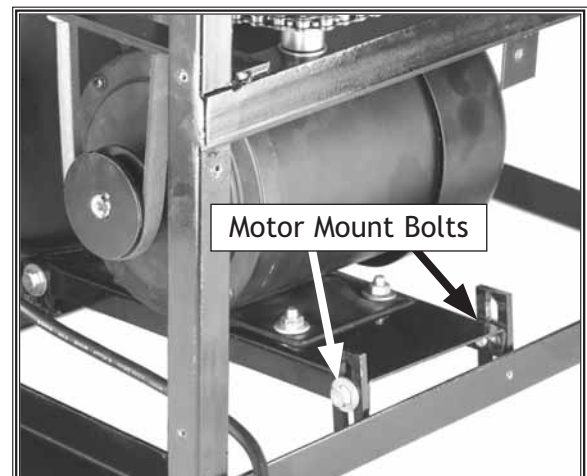


Figure 17. Belt tension check.



Pulley Alignment

When replacing a V-belt, align pulleys if required.

To check and align the pulleys, do these steps:

1. DISCONNECT POWER TO THE SANDER!
2. Remove the side panel, and loosen the four bolts that secure the motor to the motor mounting plate.
3. Slide the motor as needed to align the pulleys to the straightedge shown in **Figure 19**.

Note: You can also loosen the set screws on the motor pulley to fine tune any pulley adjustments.

4. When the pulleys are aligned, tighten the four motor mount bolts.
5. Tension the V-belt and replace the belt cover.

Figure 18. Belt tension adjustment.
(Note: All panels removed for clarity.)

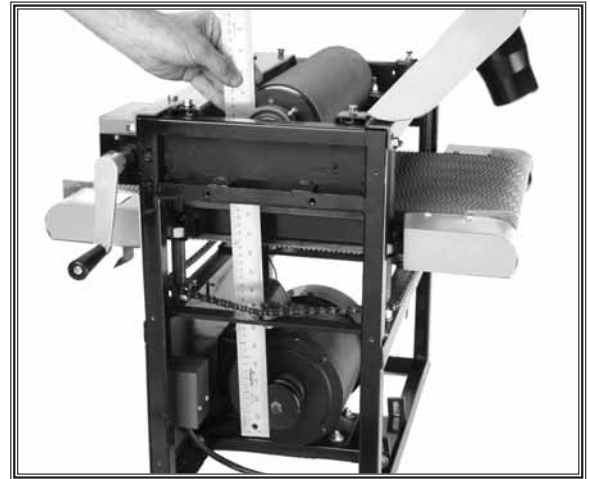


Figure 19. Pulley alignment.
(Note: All panels removed for clarity.)

Conveyor Tensioning

The conveyor may slightly stretch with continued use and will eventually need to be retensioned. If a loose conveyor belt is ignored, it will slip and heat up the drive roller (Figure 20) damaging the roller, conveyor belt, and causing a washboard effect on the workpiece surface.

When you tension the conveyor, focus on tensioning the adjustment bolts in equal increments. Tensioning one side more than the other will cause tracking problems, which will require you to take additional steps to get the sander operating correctly.

To tension the conveyor belt, do these steps:

1. Use a magic marker, correction fluid, or fingernail polish to mark the front of the conveyor tensioning bolt on both sides (Figure 21). This step will aid you in keeping track of the rotations as you turn the bolts, so they remain as equal as possible.

Note: Removing the front right and left roller guard covers makes it easier to access the adjustment bolts. Be sure to reinstall the guards when adjustments are complete.

2. Turn both of the conveyor adjustment bolts counter-clockwise one full turn at a time until the conveyor belt no longer slips during operation.
 - If the conveyor starts tracking to one side, immediately turn the drum sander **OFF** and perform the tracking instructions.

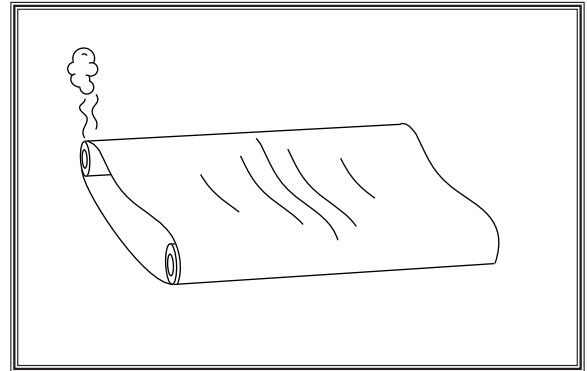


Figure 20. Loose and slipping conveyor belt.

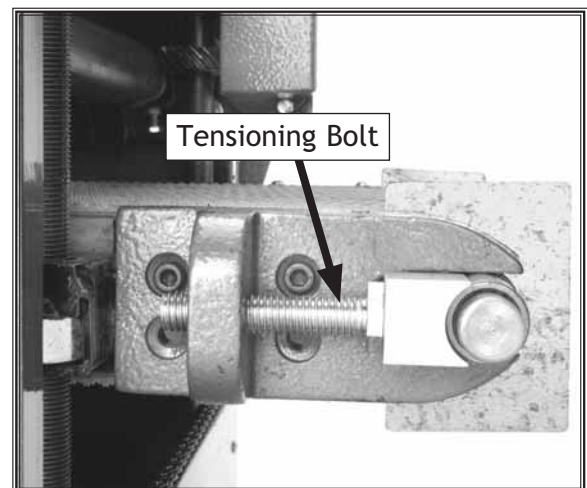


Figure 21. Conveyor belt tension adjustment.

Conveyor Tracking

If the conveyor tracks to either side and is ignored, the edge of the conveyor belt will wear and break apart (Figure 22). Then the conveyor belt must be replaced and the tracking corrected.

Replacing a damaged conveyor is a big job. Always be careful to make sure that the belt does not travel too far to one side or the other.

Tracking the conveyor is a balancing process that takes patience and a small degree of trial-and-error. Usually you must over-tighten the loose side (the side the belt is tracking towards) to make the conveyor move to the middle of the rollers, then loosen that same side to make the conveyor stay in position. If you adjust the bolt too much either way, then you have to repeat the process until the conveyor rides in the middle and stays there during continuous operation.

To set the conveyor tracking, do these steps:

1. Turn the conveyor **ON**, set conveyor speed to high, and watch the belt track.
2. Determine which side the conveyor is tracking towards (the loose side) and tension the adjustment bolt (Figure 23) on that side until the conveyor tracks in the opposite direction.

Note: *Tracking changes may take up to three minutes before they are noticeable.*

3. When the conveyor is near the middle of the rollers or table, loosen the adjustment bolt until the conveyor stops moving and tracks straight.
 - If the conveyor tracks too far to the other side, then adjust the bolt as necessary to bring it back and repeat Steps 2 & 3 until the tracking is correct.

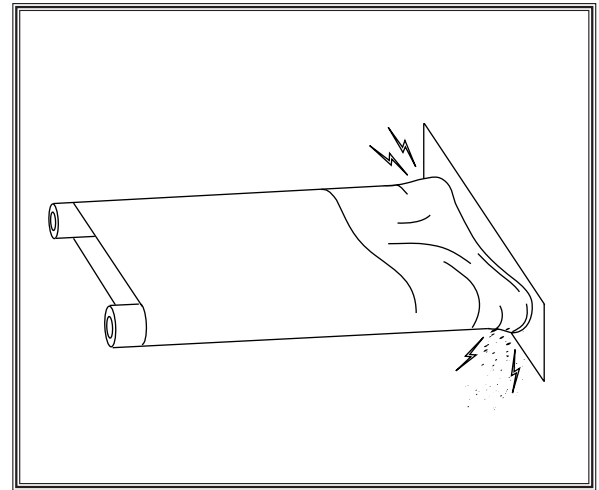


Figure 22. Bad conveyor belt tracking.

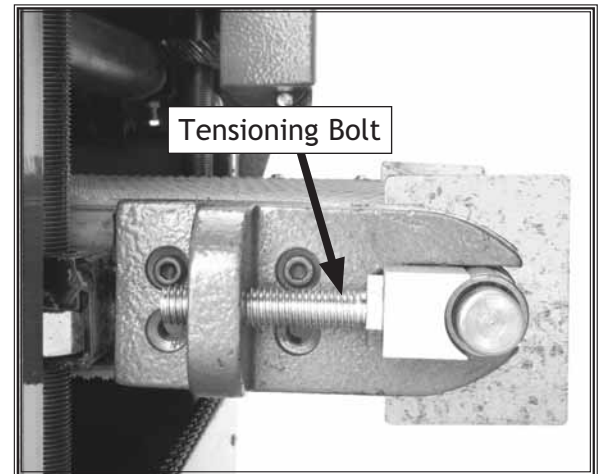


Figure 23. Conveyor belt tracking adjustment.



Figure 24. Gauge boards.

Gauge Boards

For the adjustments in this section, you will need to make two 24" gauge boards that are identical in thickness (Figure 24). The quality of your gauge boards will have direct bearing on the quality of your adjustments on your drum sander.

Drum-to-Table Squaring

The drums can be adjusted in fine increments at the pillow block bearings and in larger increments by using the table lift screws.

While adjusting the drum, keep in mind that having the drum square with the conveyor table (**Figure 25**) is critical to the sanding operation. Care should be taken to make the tolerances as close as possible (within 0.002" from one side to the other) when adjusting the drum height.

To square the sanding drum with the table surface, do these steps:

1. DISCONNECT POWER TO THE SANDER!
2. Open the top cover.
3. Loosen the lock nuts (see **Figure 26**) on the drum pillow block bearing housing.
4. Place the gauge boards on the conveyor table and position them under the pressure rollers (**Figure 27**).
5. Raise the table until the gauge boards just touch the bottom of the sanding drum.

Note: A good way to know when they are touching is to rock the sanding drum back and forth while raising the table until you hear or feel contact with the gauge boards.

6. Lower the table one full turn of the handcrank handle. Wait until the chain starts moving before starting to count the handcrank handle rotation.
7. Starting at one end, place a 0.002" feeler gauge between the sanding drum and the gauge board. (The feeler gauge should slide with moderate resistance, without forcing the drum to roll.)
8. Repeat **Step 7** at the other end of the drum.
 - If the difference between the two sides is 0.002" or less adjust the drum-to-table squareness.
 - If the difference between the two sides is more than 0.002", then one side must be adjusted to within 0.002" of the other (with the ultimate goal of making them dead even). Go to **Step 9**.

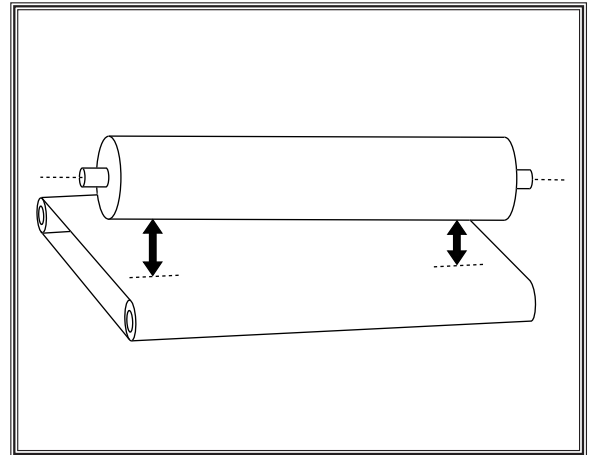


Figure 25. Drum out of square with table.

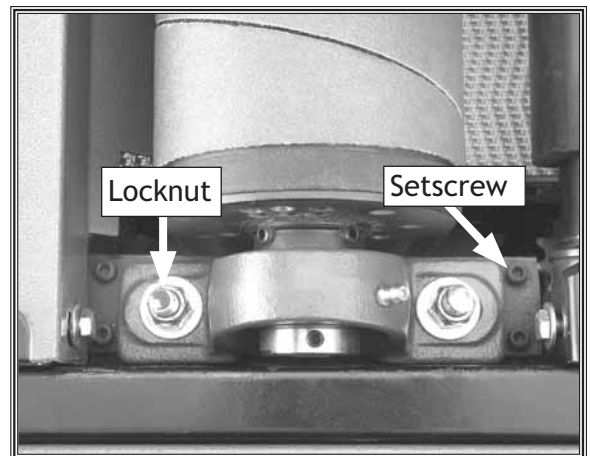


Figure 26. Pillow bearing housing.



Figure 27. Gauge boards in position.

9. Loosen the lock nuts (see **Figure 28**) on the pillow block bearing that requires adjustment.
10. Rotate the four setscrews $\frac{1}{8}$ of a turn clockwise to raise the pillow block bearing (see **Figure 28**).

Note: Turn all setscrew sets an equal amount.

11. Tighten the lock nuts and recheck the alignment, using the gauge boards and repeating **Steps 1-8** from the previous subsection. Tightening the lock nuts will pull the drum downward slightly. Be sure to adjust to compensate for this movement. **Do not over tighten the lock nuts. The pillow block bearings can break if over tightened.**

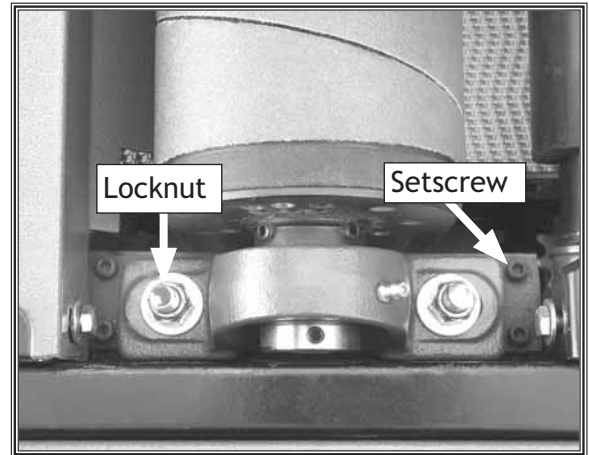


Figure 28. Pillow bearing housing.

Dust Scoop Gap

For this adjustment, you will adjust the dust scoop up or down to focus dust collection suction where the most dust is created (see **Figure 29**).

To adjust the dust scoop gap, do these steps:

1. DISCONNECT POWER TO THE SANDER!
2. Open the top cover.
3. Insert two gauge boards under the sanding drum and dust scoop (see **Figure 30**).
4. Raise the table until the drum just touches the gauge blocks.
5. Loosen the dust scoop mounting bolts (see **Figure 31**) and slide the scoop up or down until it is $\frac{1}{32}$ " above the gauge blocks (see **Figure 29**). You may have to bend the lip of the dust scoop to get the appropriate gap.
6. Tighten the dust scoop mounting bolts.
7. Close the top cover and secure it shut.

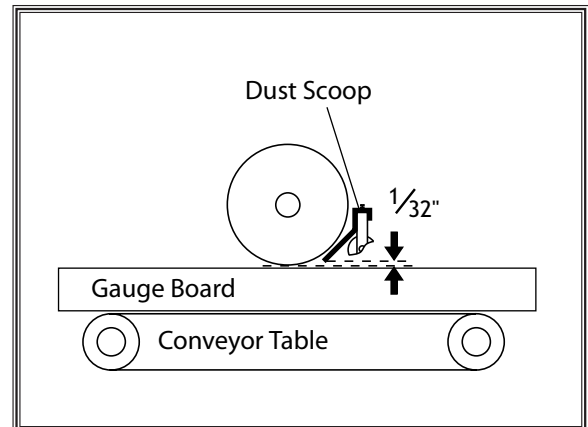


Figure 29. Dust scoop gap.



Figure 30. Gauge boards in position.

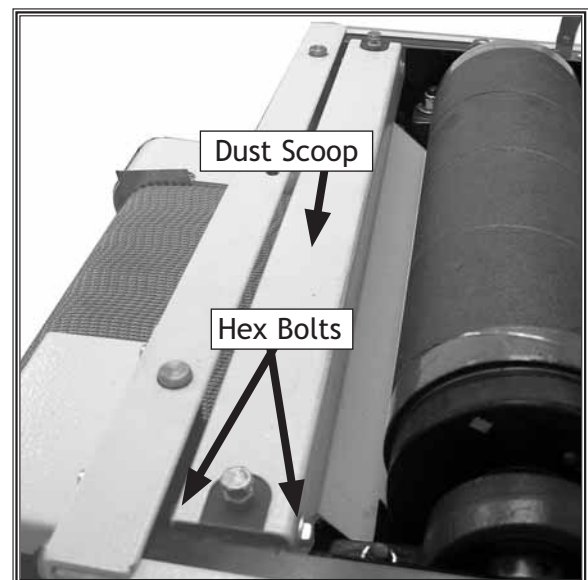


Figure 31. Dust scoop.

Drum-to-Conveyor Tracking

If the drum-to-conveyor tracking (**Figure 32**) is off track by more than $\frac{1}{8}$ ", you will have to adjust the tracking.

To check and adjust the drum-to-conveyor tracking, do these steps:

1. DISCONNECT POWER TO THE SANDER!
2. First measure the distance between the outside of the drum and the inside of the dust scoop (**Figure 33**). The distances should be within $\frac{1}{8}$ " of each other at each end of the drum.
3. If the measurements are not within $\frac{1}{8}$ ", the drum can be moved by loosening the lock nuts on the pillow block bearings (**Figure 34**) and moving one end of the drum forward or backward as necessary in the slotted holes.

Note: After you have adjusted the drum, do not forget to tighten the lock nuts and recheck the alignment by repeating Steps 1-3.

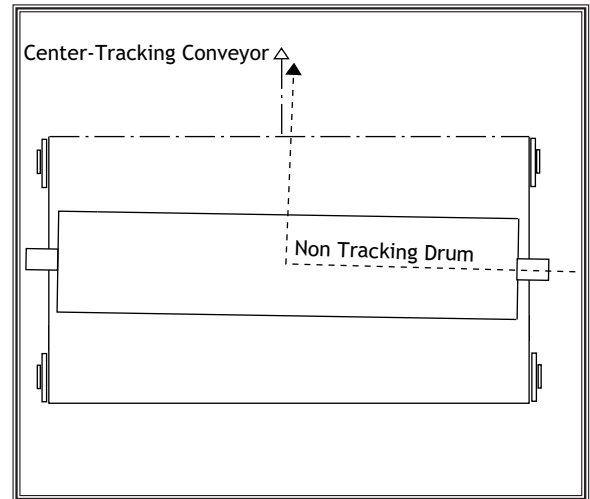


Figure 32. A non-tracking drum.



Figure 33. Measuring drum alignment.

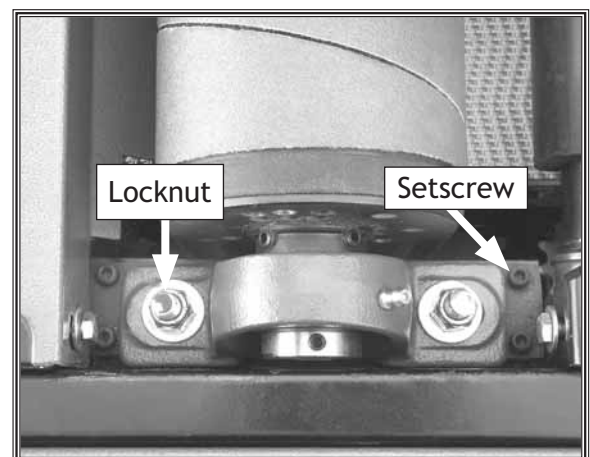


Figure 34. Pillow bearing housing.

Pressure Roller Height and Tension

The pressure rollers are factory set at 0.080" (2mm) below the bottom of the sanding drum and are fully adjustable either up/down with the lower adjustment bolts (Figures 35 and 36). After the adjustment has been made, always lock the jam nuts against the bottom to prevent them from moving.

Proper pressure on the workpiece helps avoid kickback and keeps the workpiece from slipping. However, as pressure increases on the workpiece, snipe also increases (some degree of snipe is normal with all drum sanders).

If snipe becomes a problem, you can minimize it by reducing pressure. To lower pressure, turn the lower adjustment bolts counterclockwise to raise the pressure roller height. To increase pressure, turn the lower adjustment bolts clockwise (lowering pressure rollers).

However, you can only minimize snipe so much before the workpiece will slip or kick out, causing a hazard to the operator. If this happens, you have raised the pressure rollers too high for them to function as intended—the pressure rollers **MUST** be lowered to prevent injury.

These instructions will restore the pressure rollers to the factory setting.

WARNING

Raising the pressure rollers too high to minimize snipe will cause the workpiece to slip or kick out, causing a hazard to the operator. You **MUST** lower the pressure rollers to prevent injury!

To adjust the pressure rollers to the factory setting, do these steps:

1. DISCONNECT POWER TO THE SANDER!
2. Open the top cover.
3. Place the gauge boards on the conveyor table and position them under all the pressure rollers (Figure 27).
4. Raise the table so the gauge boards touch the bottom of the sanding drum, as shown in Figure 27.

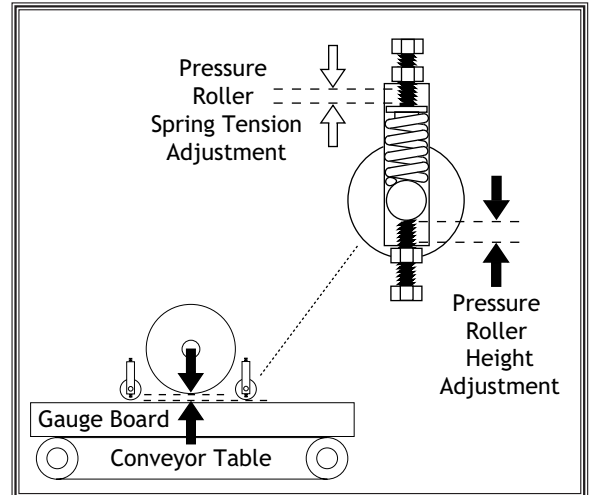


Figure 35. Pressure roller adjustments.

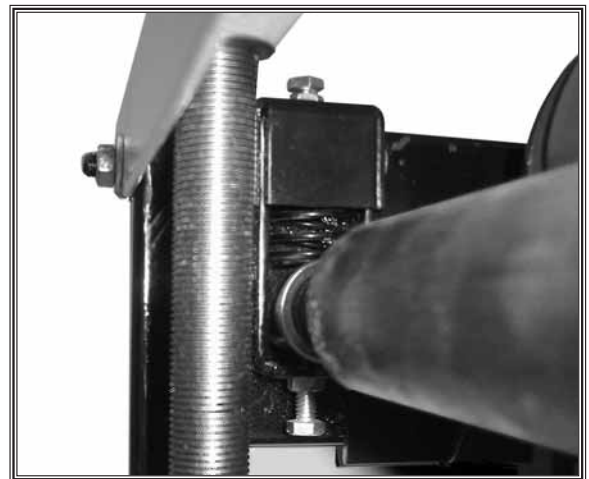


Figure 36. Pressure roller adjustment location.



Figure 27. Gauge boards in position.

5. Lower the table three full turns of the handcrank.
6. Turn the adjustment bolt (Figure 37) as required so the roller just touches the gauge board (Figure 38).

Note: To gain better access for the following adjustments, you can open the side covers.

7. Repeat Step 6 for the opposite side of the same pressure roller.
8. Repeat Steps 6-7 with the second pressure roller. Each pressure roller should look like Figure 38 when properly adjusted.
9. Tighten the jam nuts on the adjustment bolts (Figure 37) to lock the adjustment.

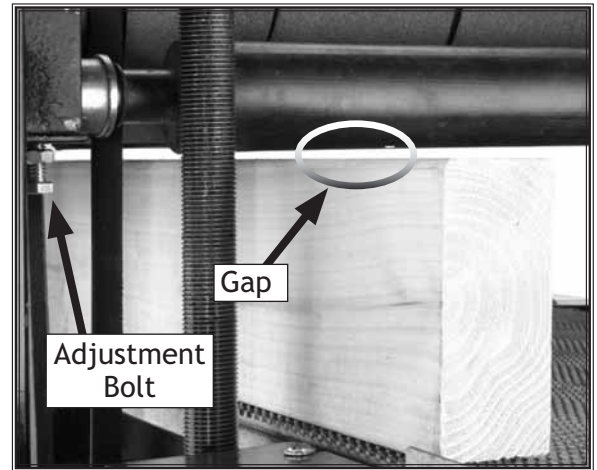


Figure 37. Gauge boards below rollers.

Scale Pointer Calibration

In order for the scale pointer to be accurate, it must be calibrated.

We recommend calibrating your scale pointer any time you adjust the drum height or table lift screws.

To calibrate the scale pointer, do these steps:

1. Sand a workpiece (Figure 39) with the drum sander and measure the thickness of the sanded workpiece.
2. Loosen the screw that secures the scale pointer and adjust it to the thickness of the workpiece.

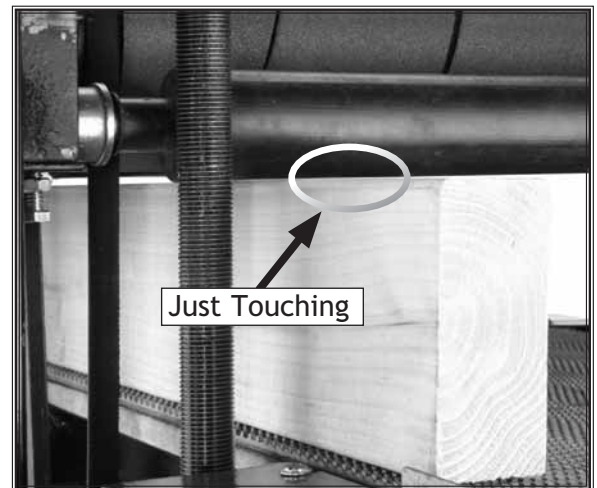


Figure 38. Gauge boards touching rollers.

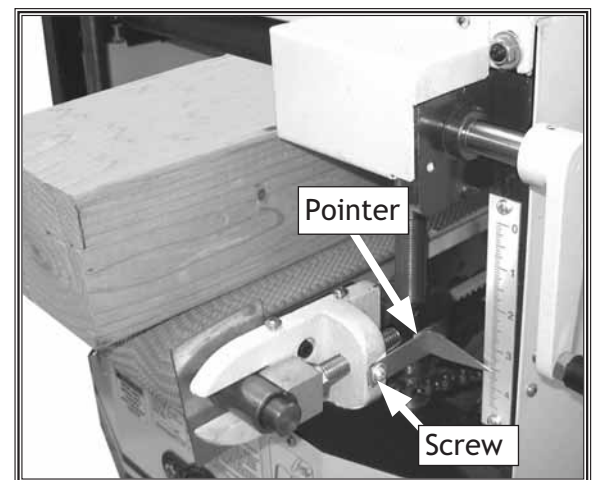


Figure 39. Pointer calibration.

Table Adjustment

The table lift screws are connected by a chain and driven by the handcrank handle. (When the chain is removed from a sprocket on one of the lift screws, that lead screw can adjust that portion of the table up/down independently to assist in setting the table parallel to the drum). Each complete tooth rotation on a sprocket moves that corner of the table 0.007" or 0.18mm.

Adjusting the table lift screws will only be necessary if you need to adjust the drum height more than allowed at the pillow block bearing. If you have removed the table or chain (see [Page 37](#)) during a service procedure, you must reset the drum parallel to the table.

To adjust the table lift screws, do these steps:

1. DISCONNECT POWER TO THE SANDER!
2. Open the right side and front panels.
3. Raise the table up to at least the 1" mark on the height scale.
4. At the lead screw that needs to be adjusted, mark the end of a sprocket tooth and the chain hole where that tooth is meshed, as shown in [Figure 40](#).
5. Loosen the chain by loosening the hex nut on the bottom of the idler roller sprocket shown in [Figure 41](#).
6. Carefully move the chain off only the marked sprocket.
7. Keep track of the marked chain hole and rotate the sprocket the necessary number of teeth away from the marked one to meet the difference in height needed.
8. Fit the chain back over the sprocket, making sure the new sprocket tooth is inserted into the marked chain hole.
9. Re-tension the chain and check the new height setting.
10. Repeat [Steps 5-9](#) as needed until the table height is parallel to the drums in all four corners, then tighten the idler sprocket and calibrate the scale pointer.

NOTICE

Marking the chain and sprocket locations will save you a substantial amount of time when you reinstall the chain. Make sure you have done this before removing the chain.

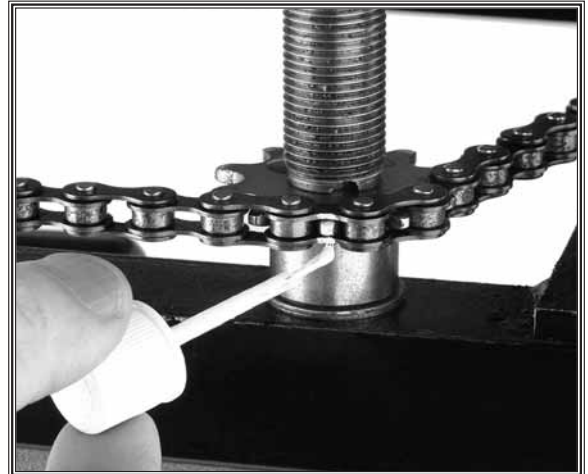


Figure 40. Marking sprocket and lead screw timing.



Figure 41. Chain tensioner sprocket.

Conveyor Replacement

Replacing the conveyor belt is a big job and requires moderate mechanical skill and a fair amount of patience. For planning purposes, expect to have your machine out of operation for at least a few hours.

As you remove hardware to complete these instructions, we recommend putting all the bolts, screws, washers, etc. back into the holes from which they came. This simple habit will take slightly longer when disassembling the machine, but it will save you a lot of time and reduce frustration during reassembly.

To replace the conveyor belt, do these steps:

1. DISCONNECT POWER TO THE SANDER!
2. Remove the top cover by loosening the hex bolts and removing the Phillips head screws (Figure 42) securing the top cover support.
3. Remove the right handle and side panel (two cap screws and six tap screws).
4. Remove the gear cover (two Phillips head screws) and loosen the two hex nuts securing the brace and remove it.
5. Remove the dust scoop (four hex bolts and four flat washers), compression springs and spring plates (Figure 43) from the front pressure roller and set the roller aside.
6. Remove the rear pressure roller (four hex bolts and four flat washers) along with the brackets, compression springs, and spring plates shown in Figure 44.

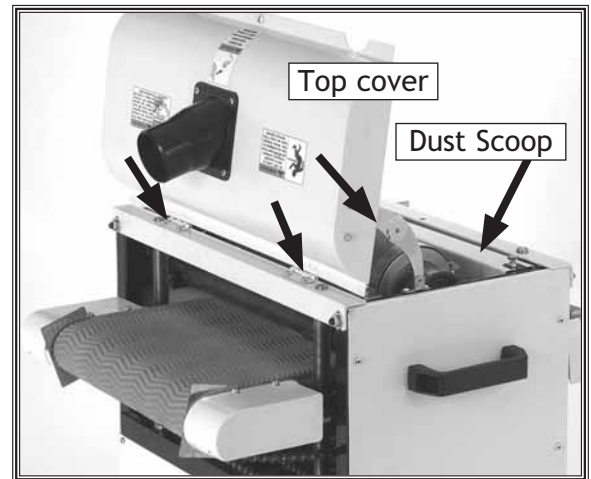


Figure 42. Top cover mounting hardware.

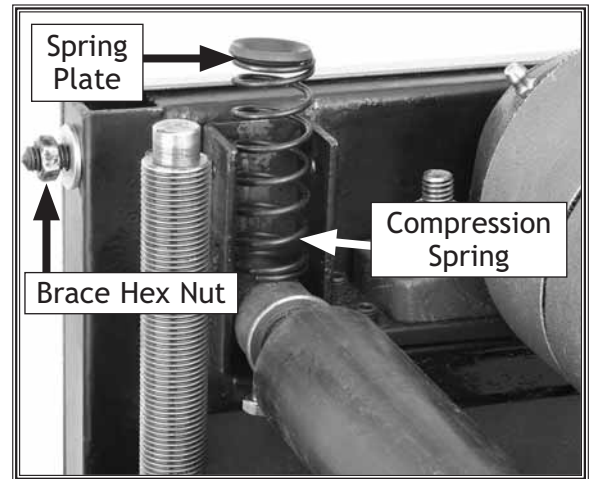


Figure 43. Front pressure roller components.

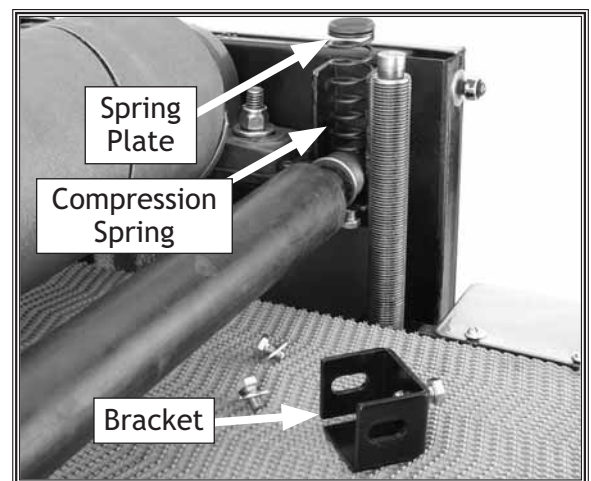


Figure 44. Rear pressure roller components.

7. Remove the rear panel (six tap screws).
8. Loosen the hex bolts securing the motor bracket to the frame, raise the motor and remove the V-belt from the motor pulley. The drum sander should now look similar to **Figure 45**.
9. Remove the sanding drum (four lock nuts and four flat washers) and V-belt (**Figure 46**).
10. Remove the guard covers for the conveyor front and rear rollers (eight Phillip head screws). The drum sander should now look similar to **Figure 47**.

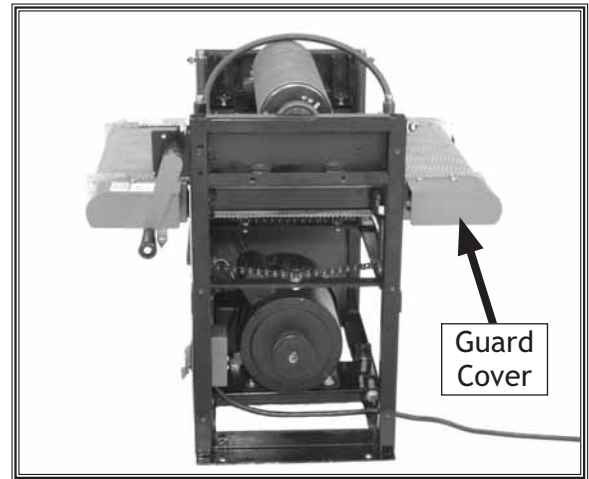


Figure 45. Drum sander disassembled to Step 8.

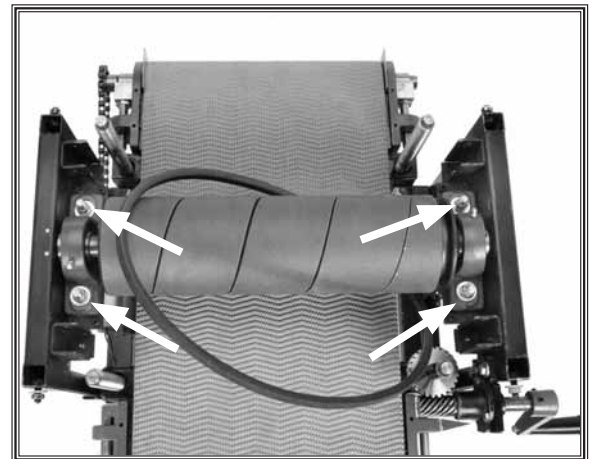


Figure 46. Locations to remove sanding drum retaining nuts.

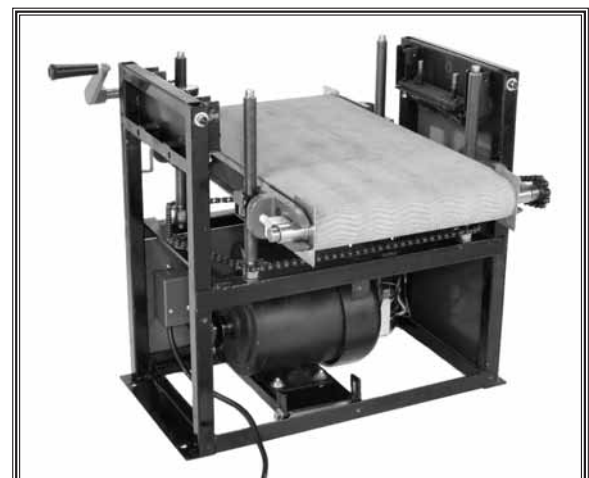



Figure 47. Drum sander disassembled to Step 10.

SERVICE

11. Mark the top of the table lift screws with arrows (all pointing in same direction) and mark the screws with liquid correction fluid above the mounting bracket (Figure 48). Later, when you reassemble the conveyor table, you can use these marks to reset the table height close to the current position.
12. Mark the chain and sprockets with correction fluid.
13. Loosen the chain tension sprocket, carefully pull the chain off of all the sprockets, and remove it from the cabinet.
14. Keeping track of the number of turns for later reassembly, loosen the conveyor belt at the front adjustment bolts, as shown in Figure 49.
15. Disconnect the conveyor feed motor wires from the circuit board.
16. Remove the scale pointer.

Before removing the table, note the number and location of brass shims (Figure 50) under the table lift screws. Knowing their correct position will help you align the conveyor table during reassembly.

Continued on next page 

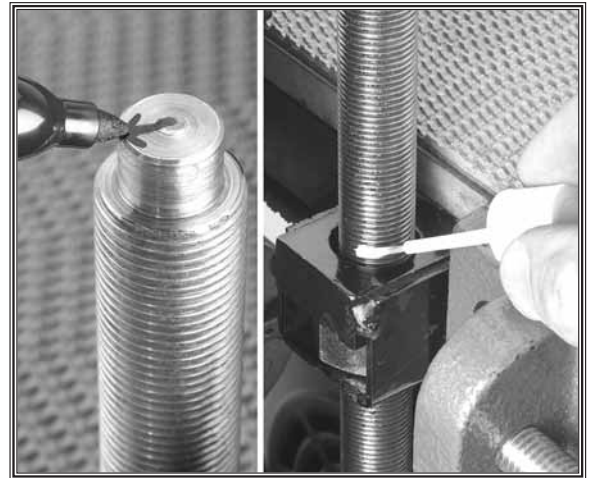


Figure 48. Locations to mark lead screws.



Figure 49. Conveyor belt loosened at the front adjustment bolts.

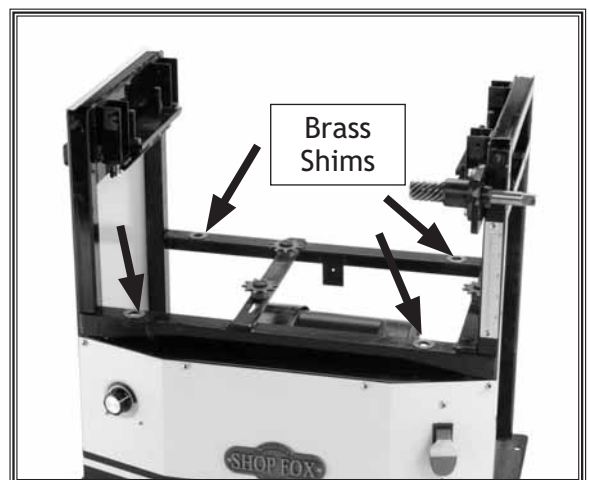


Figure 50. Brass shim locations.

17. With the help of an assistant, carefully lift the table off the drum sander cabinet, as shown in **Figure 51**.
18. Lay the conveyor table on a flat surface.
19. Loosen the rear left (**Figure 52**) roller bracket (two cap screws) enough so the conveyor motor chain has slack.
20. Remove the conveyor motor chain.
21. Remove the conveyor motor (two cap screws) and the rear roller bracket (two cap screws) shown in **Figure 52**.
22. Remove the rear roller.
23. Remove the front left roller bracket (two cap screws) and the front roller.
24. Remove the front right and rear roller brackets (four cap screws).
25. Place the right side of the conveyor on a flat surface, then unthread and remove the front and rear table lift screws.
26. Remove the belt to expose the table as shown in **Figure 53**.
27. Measure the distance between the front right table lead screw sprocket and the mounting bracket. If necessary, rotate the rear shaft so the sprocket-bracket distance is the same as the front right table lead screw.
28. Install the new conveyor belt.
29. Reinstall the front left and rear left table lift screws to match the front right lead screw height.
30. Reassemble the drum sander by reversing the disassembly steps.
31. After reassembly, adjust the drums and pressure rollers to their proper settings as outlined in this manual.
32. After you have reinstalled the conveyor table, make sure the four lower pressure roller adjustment bolts are threaded the same distance into the roller mount brackets (**Figure 53**).
33. After reinstalling the top cover and brace, tighten the mounting bolts.

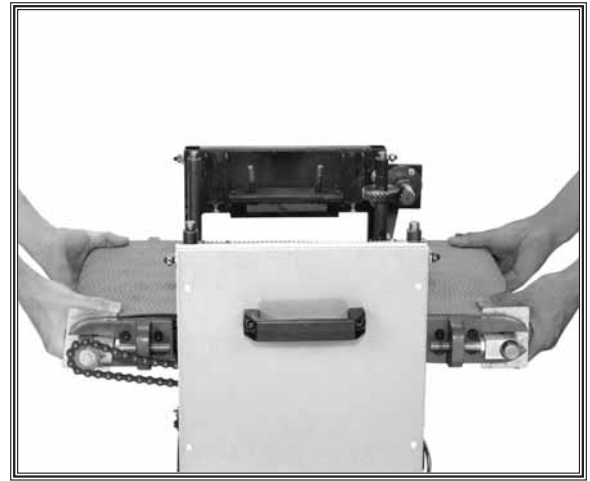


Figure 51. Lifting the table off safely.

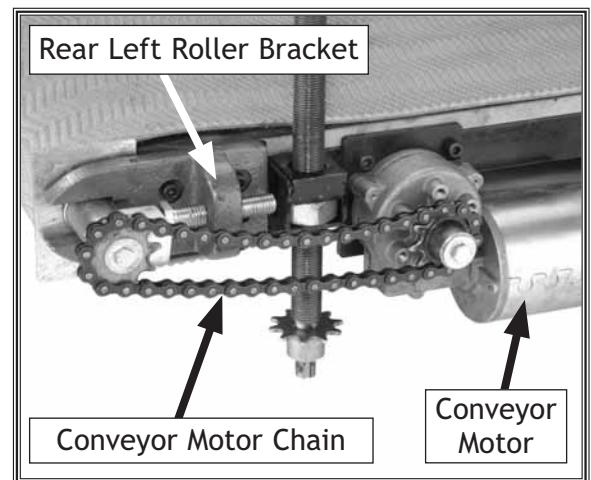


Figure 52. Rear left roller bracket loosened.

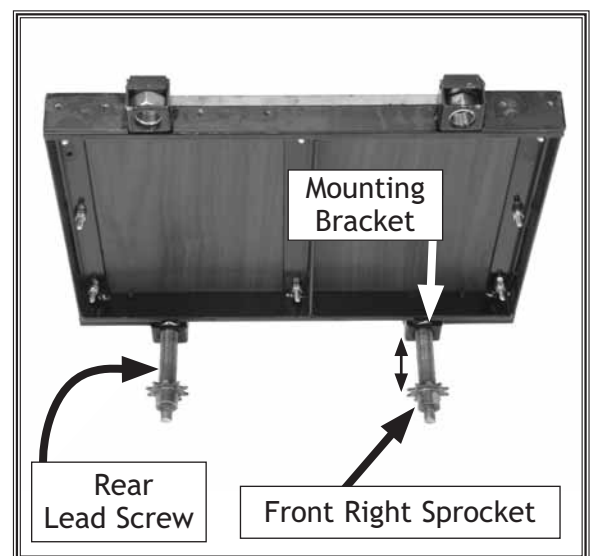


Figure 53. Conveyor belt removed from table.

34. Before reinstalling the pinion and side gear dust cover, try raising and lowering the conveyor table with the handcrank handle. If the side gear and pinion teeth (see **Figure 54**) are not meshed, the handcrank handle will not raise the table.

If this happens, loosen the handcrank handle mounting bolts, and move the side gear around until the teeth mesh with the pinion, then secure the handcrank handle.

35. Reinstall and secure the brace.

36. Try moving the conveyor table up and down.

37. Continue adjusting the side gear and pinion until the handcrank handle raises and lowers the conveyor table.

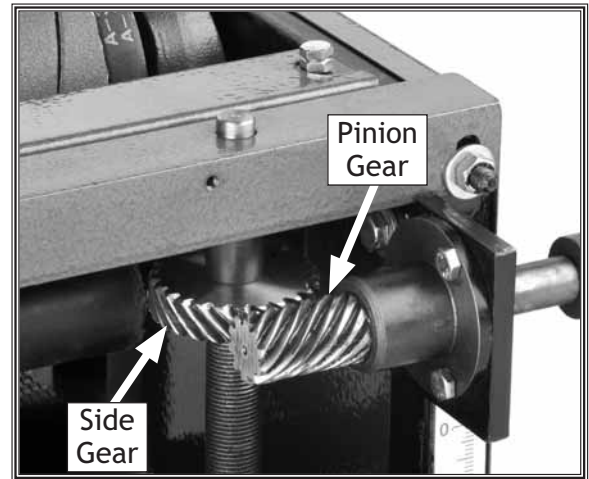


Figure 54. Worm and pinion gears meshed.

Bearing Replacement

The Model W1740 Drum Sander is designed for many years of reliable service. But after long periods of heavy use, it may be necessary to replace the drum bearings. Always replace both bearings the same time.



To replace the drum bearings, do these steps:

1. DISCONNECT POWER TO THE SANDER!
2. Open the top cover. Remove the mounting nuts, the washers and the set screws (see Figure 55).

NOTICE

DO NOT hammer on the bearing or housing as you WILL damage these precision parts.

3. Lift the drum and slide the bearing block and bearing from the drum shaft.
4. Clean and inspect the drum shaft for cracks, burrs, wear, and other damage; replace/repair as required.
5. Use a screwdriver to pry and rotate the bearing so it is horizontal to the bearing-block mounting flanges (see Figure 56).
6. Slide the bearing out of the bearing block (see Figure 57).

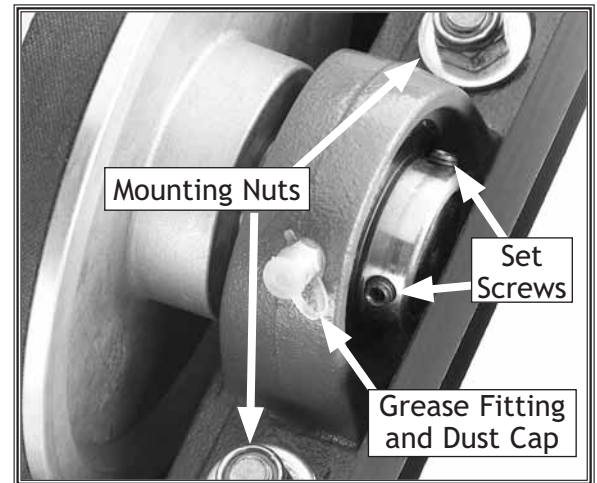


Figure 55. Mounting nuts, washers, and set screws.



Figure 56. Bearing positioning for removal.

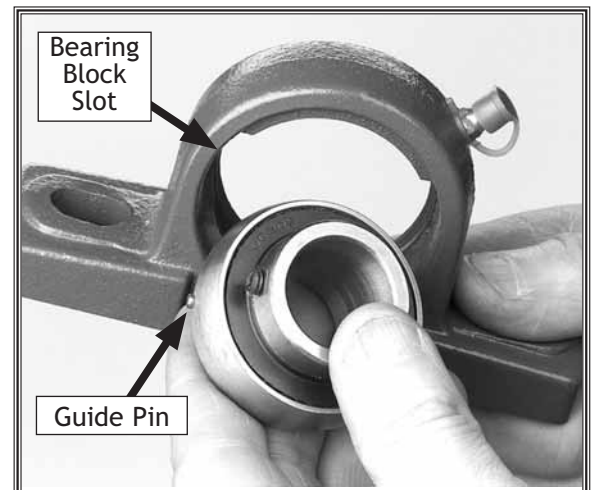


Figure 57. Removal and installation bearing slot positioning.

7. Remove any metal or abrasives trapped in the bearing grease groove and grease port, or contaminants will be pumped into the new bearing when you lubricate it, causing bearing failure (**Figure 58**).
8. Clean and inspect the bearing-block for cracks, burrs, wear, and other damage; replace/repair as required.

The "bearing race" should rotate inside of the "bearing block" smoothly. If the race is loose or wobbles inside of the bearing block, replace the bearing block.

NOTICE

Make sure the bearing grease hole in the bearing lines up with the grease groove in the bearing block and that no obstructions prevent bearing lubrication.

9. Insert the new bearing into the bearing-block so when the bearing block is installed in the sander, the grease fitting is facing forward and the set screws and hub are on the right-side of the bearing housing (see **Figures 58** and **59**).
10. Slide (**DO NOT** hammer) the bearing block and bearing onto the drum shaft.
11. Lower the drum and bearing-block onto the mounting studs, and install the flat washers and the nuts. Tighten the nuts in an alternating pattern until snug.
12. Install and tighten the set screws.
13. Wipe the grease fitting clean, and lubricate the bearing with just enough grease to slightly seep from the dust seal and wipe clean (these bearings are not pre-lubricated). **DO NOT** over-grease.
14. Repeat **Steps 3–13** on all other bearings that need replacement. Always replace both bearings on the same drum.
15. Adjust the drum and pressure rollers as outlined in this manual.

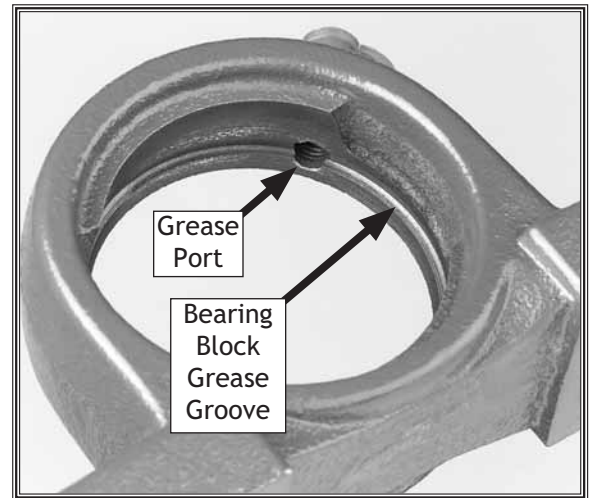


Figure 58. Bearing-block grease groove and grease port.

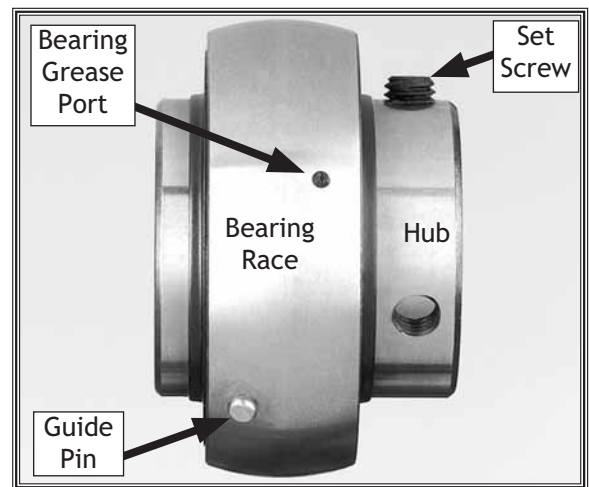
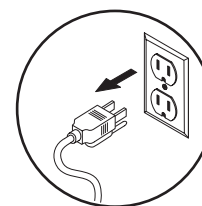


Figure 59. Key bearing parts.

Troubleshooting

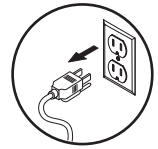


This section covers the most common problems and corrections with this type of machine. **WARNING! DO NOT** make any adjustments until power is disconnected and moving parts have come to a complete stop!

Motor & Electrical

PROBLEM	POSSIBLE CAUSE	CORRECTIVE ACTION
Machine does not start or a breaker trips.	<ol style="list-style-type: none"> 1. Power supply is faulty, or is switched OFF. 2. Motor ON button or ON/OFF switch is faulty. 3. Motor connection is wired incorrectly. 4. Plug or receptacle is at fault or wired incorrectly. 5. Start capacitor is faulty. 6. Centrifugal Switch is at fault. 7. Motor is at fault. 	<ol style="list-style-type: none"> 1. Test power plug and receptacle for good contact and correct wiring. 2. Replace faulty ON button or ON/OFF switch. 3. Correct motor wiring (see Page 43). 4. Make sure all hot lines and grounds are operational and have correct voltage on all legs. 5. Test and replace capacitor as required. 6. Adjust or replace the centrifugal switch. 7. Test, repair or replace motor.
Machine has vibration or noisy operation.	<ol style="list-style-type: none"> 1. Motor or component is loose. 2. Motor fan is rubbing on fan cover. 3. V-belt is worn or is loose. 4. Pulley is loose. 5. Motor bearings are at fault. 6. Centrifugal switch is operating. 	<ol style="list-style-type: none"> 1. Inspect, replace for stripped or damaged bolts/nuts, and re-tighten with thread locking fluid. 2. Replace dented fan cover, and replace loose or damaged fan. 3. Inspect belt and adjust or replace as required. 4. Remove pulley, replace shaft, pulley, setscrew, and key as required, and realign. 5. Check bearings, replace motor or bearings as required. 6. No corrective action required. Normal snap/click sound on RPM wind down.
Motor overheats.	<ol style="list-style-type: none"> 1. Motor overloaded. 2. Air circulation through the motor restricted. 	<ol style="list-style-type: none"> 1. Reduce load on motor. 2. Clean off motor to provide normal air circulation.

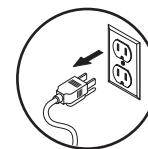
Troubleshooting



Sanding Operations

PROBLEM	POSSIBLE CAUSE	CORRECTIVE ACTION
Machine stalls or is under-powered.	<ol style="list-style-type: none"> 1. Sandpaper is worn out, or sanding depth is set too deep. 2. Low power supply voltage. 3. Belt is slipping. 4. Motor connection is wired incorrectly. 5. Plug or receptacle is at fault. 6. Pulley or sprocket is slipping. 7. Motor bearings are at fault. 8. Motor has overheated. 9. Centrifugal switch is at fault. 10. Motor is at fault. 	<ol style="list-style-type: none"> 1. Use new sandpaper with appropriate grit, and reduce the feed rate/depth of sanding. 2. Make sure all hot lines and grounds are operational and have correct voltage on all legs. 3. Replace bad belt, align pulleys, and re-tension. 4. Correct motor wiring (see Page 43). 5. Test power plug and receptacle for good contact and correct wiring. 6. Replace loose pulley and shaft. 7. Rotate motor shaft for noisy or burnt bearings, repair/replace as required. 8. Unobstructed motor cooling air flow, let motor cool, and reduce workload on machine. 9. Adjust or replace the centrifugal switch. 10. Test, repair or replace motor.
Machine lacks power; drum stops turning under load.	<ol style="list-style-type: none"> 1. V-belt loose. 2. Too much pressure on pressure rollers. 	<ol style="list-style-type: none"> 1. Tighten V-belt (Page 22). 2. Reduce pressure roller pressure (Page 29).
Machine slows when sanding, making a squealing noise, especially on start-up.	<ol style="list-style-type: none"> 1. V-belt loose. 2. V-belt worn out. 	<ol style="list-style-type: none"> 1. Tighten V-belt (Page 22). 2. Replace V-belt (Page 22).
Loud repetitious noise coming from machine.	<ol style="list-style-type: none"> 1. Pulley setscrews or keys are missing or loose. 2. Motor fan is hitting the cover. 3. V-belt is defective. 	<ol style="list-style-type: none"> 1. Inspect keys and setscrews. Replace or tighten if necessary. 2. Adjust fan cover mounting position, tighten fan, or shim fan cover. 3. Replace V-belt (Page 22).
Vibration when sanding.	<ol style="list-style-type: none"> 1. Loose drum pillow block bearings. 2. Worn drum pillow block bearings. 	<ol style="list-style-type: none"> 1. Tighten drum pillow block bearings. 2. Replace drum pillow block bearings.
Grinding, screeching, or rubbing noise when sanding drum is powered up.	<ol style="list-style-type: none"> 1. Drum bearings lack sufficient grease. 2. Drum bearings are worn and need replacement. 	<ol style="list-style-type: none"> 1. Grease pillow block bearings (Page 20). 2. Replace the drum bearings.

Troubleshooting

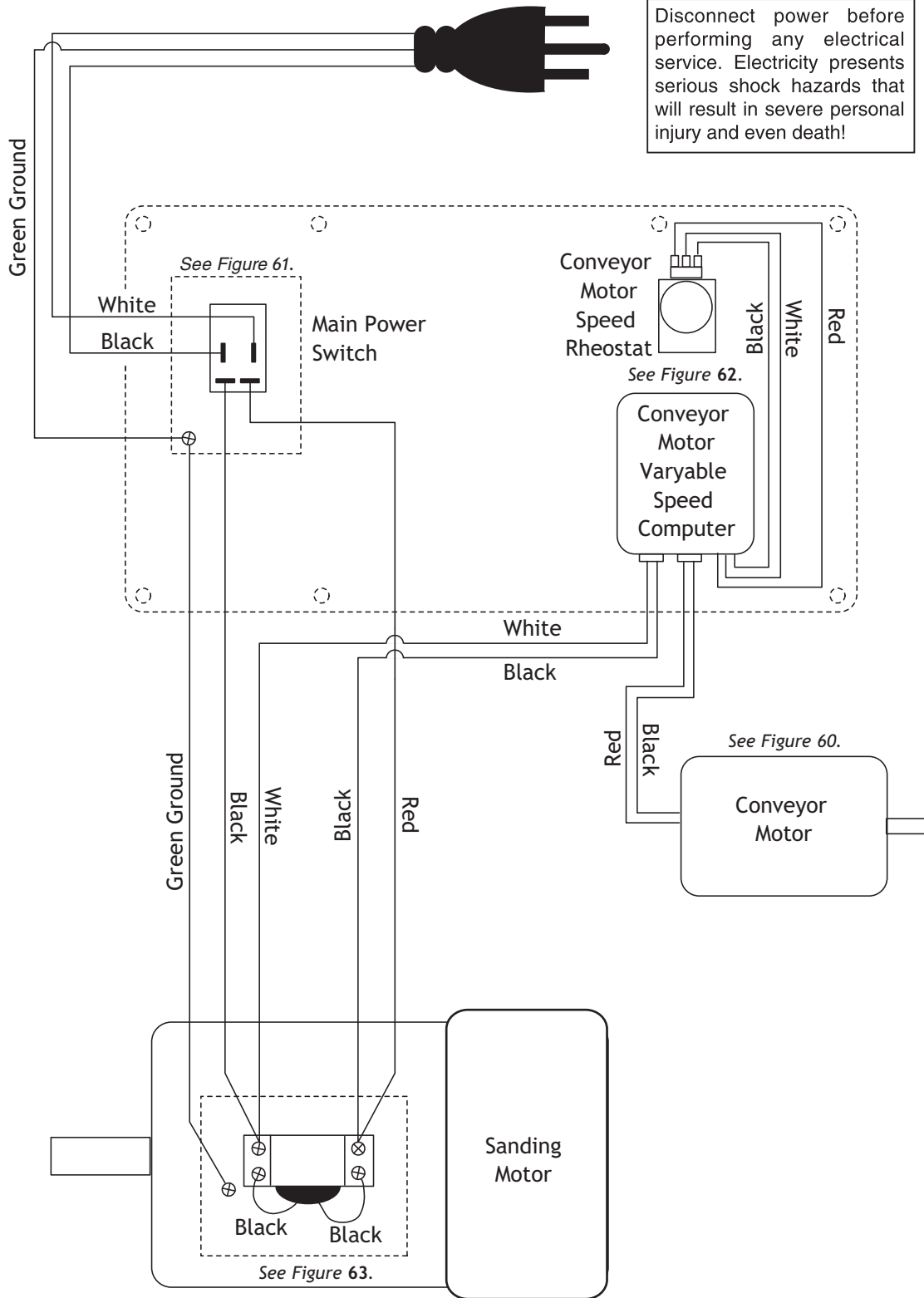


Sanding Operations (Continued)

PROBLEM	POSSIBLE CAUSE	CORRECTIVE ACTION
Short V-belt lifespan.	<ol style="list-style-type: none"> 1. Pulleys not aligned correctly. 2. Improperly tensioned. 	<ol style="list-style-type: none"> 1. Align pulleys (Page 22). 2. Properly tension V-belts (Page 22).
Conveyor slips under load.	<ol style="list-style-type: none"> 1. Conveyor is too loose. 2. Too much load. 	<ol style="list-style-type: none"> 1. Tension conveyor (Page 23). 2. Decrease load.
Conveyor tracks to one side; conveyor hits the roller cover.	<ol style="list-style-type: none"> 1. Conveyor tracking is incorrect. 	<ol style="list-style-type: none"> 1. Track the conveyor so it runs straight (Page 24).
Workpiece pulls to one side during sanding operations.	<ol style="list-style-type: none"> 1. The sanding drum is not parallel with the table. 	<ol style="list-style-type: none"> 1. Adjust the sanding drum parallel to the table (Page 25).
Excessive snipe.	<ol style="list-style-type: none"> 1. Too much pressure from all the pressure rollers. 2. Too much pressure from the rear pressure roller. 3. Lack of outfeed support. 	<ol style="list-style-type: none"> 1. Reduce pressure roller pressure (Page 29). 2. Reduce rear pressure roller pressure (Page 29). 3. Set up outfeed table or have someone catch the workpiece as it comes out.
Workpiece kicks out of sander.	<ol style="list-style-type: none"> 1. Not enough pressure from the pressure rollers. 	<ol style="list-style-type: none"> 1. Increase pressure roller pressure (Page 29).
Sandpaper tears off drums during operation.	<ol style="list-style-type: none"> 1. Nail/staple in workpiece. 2. Sandpaper not tightened or fastened correctly. 3. Drum not perpendicular to the feed direction. 	<ol style="list-style-type: none"> 1. Sand only clean workpieces. 2. Install the sandpaper correctly (Page 18). 3. Adjust the drum perpendicular to the feed direction (Page 28).
Table elevation controls are stiff and hard to adjust.	<ol style="list-style-type: none"> 1. Table lift screws are dirty or loaded with sawdust. 	<ol style="list-style-type: none"> 1. Clean and regrease table lift screws (Page 20).
Poor dust collection.	<ol style="list-style-type: none"> 1. Dust collection lines incorrectly sized for this machine, or too far away from this machine. 	<ol style="list-style-type: none"> 1. Redesign dust collection system correctly. Refer to Dust Collection Basics Handbook (ISBN 0-9635821-2-7) for further recommendations.
Grease on conveyor belt	<ol style="list-style-type: none"> 1. Chain too low. 	<ol style="list-style-type: none"> 1. Raise table far enough up so it doesn't touch chain.

Wiring Diagram

⚠ DANGER
Disconnect power before performing any electrical service. Electricity presents serious shock hazards that will result in severe personal injury and even death!



SERVICE

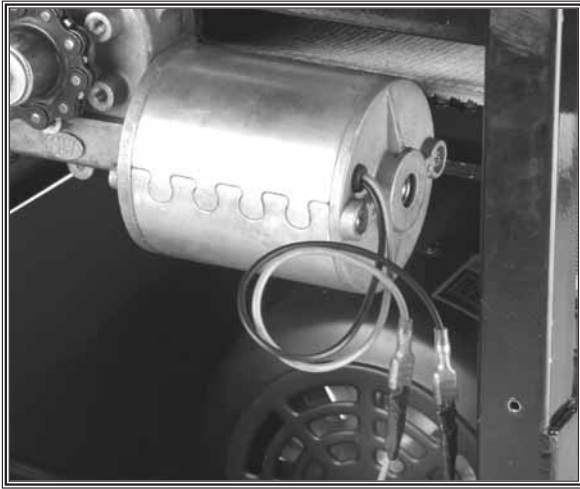


Figure 60. Conveyor Motor.

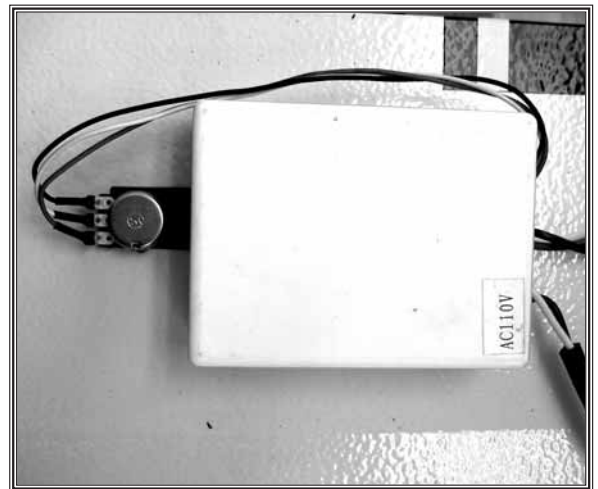


Figure 62. Conveyor motor variable speed computer and rheostat.



Figure 61. Main power switch.

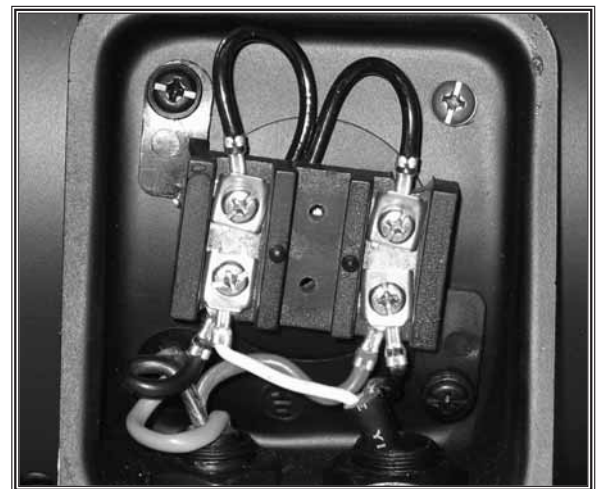
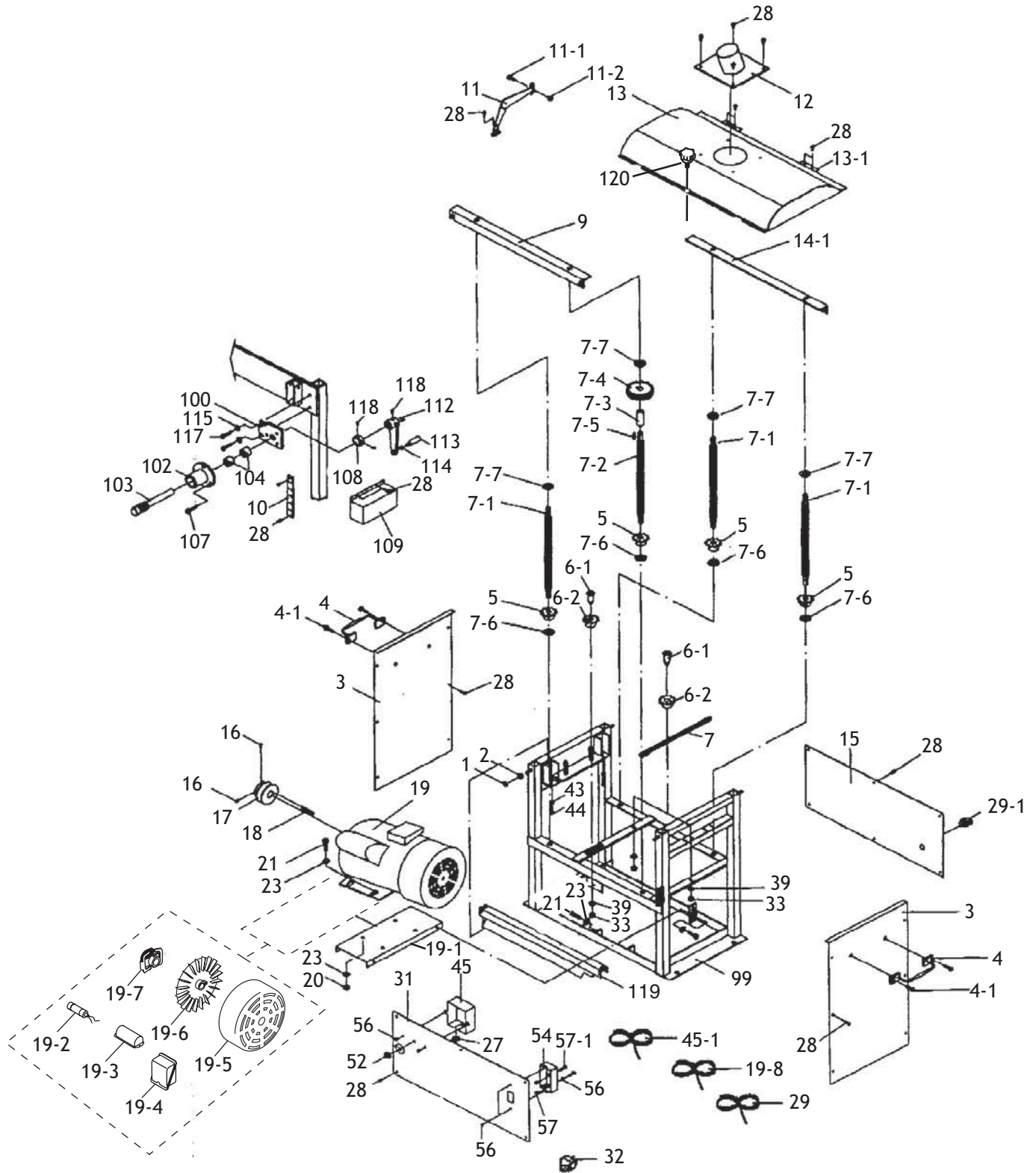


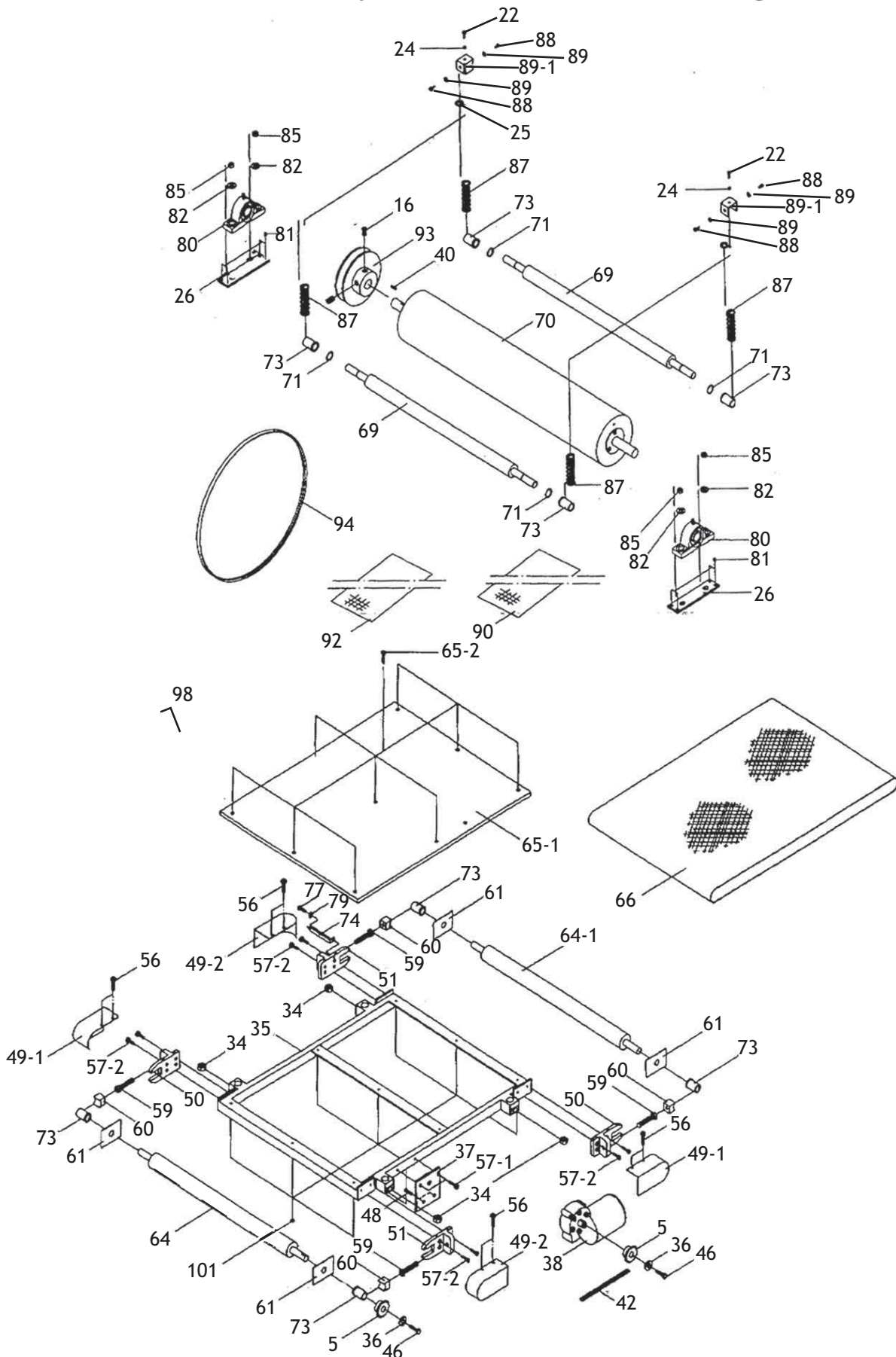
Figure 63. Sanding motor wiring box.

PARTS

Frame Parts Diagram



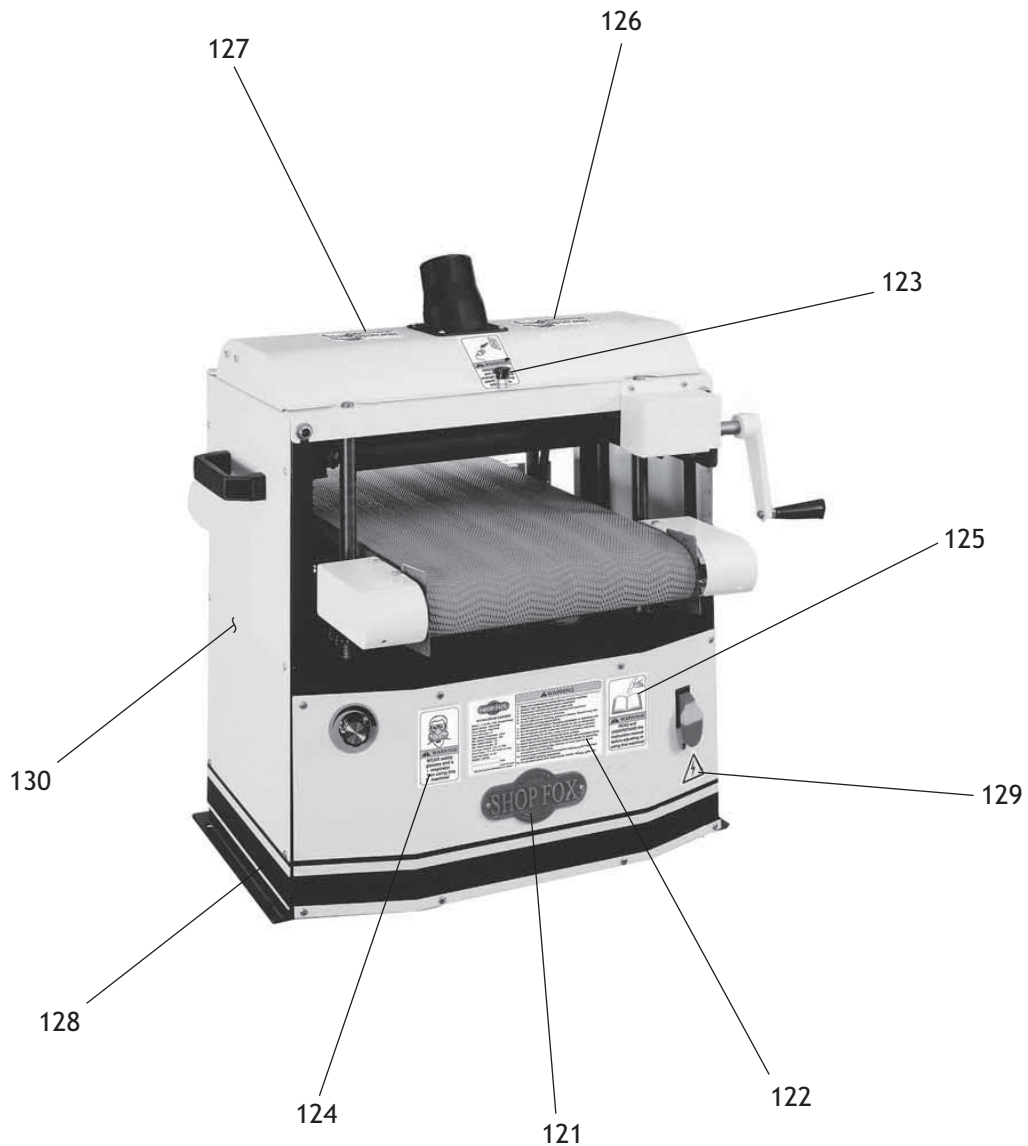
Conveyor and Drum Diagram



Label Placement

WARNING

Safety labels warn about machine hazards and ways to prevent injury. The owner of this machine **MUST** maintain the original location and readability of the labels on the machine. If any label is removed or becomes unreadable, **REPLACE** that label before using the machine again. Contact Woodstock International, Inc. at (360) 734-3482 or www.shopfoxtools.com to order new labels.



Parts List

REF	PART #	DESCRIPTION
1	XPN02	HEX NUT 5/16-18
2	XPW07	FLAT WASHER 5/16
3	X1740003	SIDE PANEL
4	X1740004	HANDLE
4-1	XPSB09	CAP SCREW 5/16-18 X 5/8
5	X1740005	SPROCKET
6-1	X1740006-1	SPROCKET SHAFT
6-2	X1740006-2	SPROCKET
7	X1740007	ELEVATION CHAIN
7-1	X1740007-1	TABLE LIFT SCREW
7-2	X1740007-2	DRIVING TABLE LIFT SCREW
7-3	X1740007-3	BUSHING
7-4	X1740007-4	SIDE GEAR
7-5	XPK06M	KEY 5 X 5 X 10
7-6	X1740007-6	BRASS WASHER 1/2
7-7	XPW01	FLAT WASHER 1/2
9	X1740009	FRONT BRACE
10	X1740010	DEPTH SCALE
11	X1740011	RIGHT SUPPORT ARM
11-1	XPS41	PHLP HD SCREW 6-32 X 1/4
11-2	XPN12	HEX NUT 6-32
12	X1740012	DUST PORT
13	X1740013	TOP COVER
13-1	X1740013-1	HINGE
14-1	X1740014-1	REAR BRACE
15	X1740015	REAR PANEL
16	XPSS03	SETSCREW 1/4-20 X 3/8
17	X1740017	MOTOR PULLEY
18	XPK110	KEY 1/4 X 1/4 X 1
19	X1740019	1.5 HP MOTOR 110V
19-1	X1740019-1	MOTOR BRACKET
19-2	X1740019-2	CAPACITOR 300MFD, 125VAC
19-3	X1740019-3	CAPACITOR COVER
19-4	X1740019-4	MOTOR WIRING COVER
19-5	X1740019-5	FAN COVER
19-6	X1740019-6	MOTOR FAN
19-7	X1740019-7	CENTRIFUGAL SWITCH
19-8	X1740019-8	MOTOR CORD
20	XPN02	HEX NUT 5/16-18
21	XPB507	HEX BOLT 5/16-18 X 3/4
22	XPB02	HEX BOLT 1/4-20 X 5/8
23	XPW07	FLAT WASHER 5/16
24	XPN05	HEX NUT 1/4-20
25	X1740025	SPRING PLATE
26	X1740026	ADJUST PLATE
27	X1740027	GROMMET
28	XPHTEK7	TAP SCREW #8 X 3/8
29	X1740029	POWER CORD
29-1	X1740029-1	STRAIN RELIEF
31	X1740031	FRONT PANEL
32	X1740032	SWITCH
33	XPN02	HEX NUT 5/16-18
34	XPN03	HEX NUT 3/4-16

REF	PART #	DESCRIPTION
35	X1740035	TABLE FRAME
36	XPW06	FLAT WASHER 1/4
37	X1740037	CONVEYOR MOTOR PLATE
38	X1740038	CONVEYOR MOTOR
39	XPW07	FLAT WASHER 5/16
40	XPK34M	KEY 5 X 5 X 20
42	X1740042	CONVEYOR MOTOR CHAIN
43	XPN05	HEX NUT 1/4-20
44	XPB05	HEX BOLT 1/4-20 X 3/4
45	X1740045	PC BOARD CONSOLE UNIT
45-1	X1740045-1	VS POWER CORD
46	XPFH04	FLAT HD SCREW 1/4-20 X 5/8
48	XPB19	HEX BOLT 1/4-20 X 1/2
49-1	X1740049-1	LEFT ROLLER END GUARD COVER
49-2	X1740049-2	RIGHT ROLLER END GUARD COVER
50	X1740050	LEFT ROLLER BRACKET
51	X1740051	RIGHT ROLLER BRACKET
52	X1740052	VARIABLE SPEED CONTROL KNOB
54	X1740054	SWITCH BOX
56	X1740056	FLANGE SCREW 10-24 X 1/2
57	XPN07	HEX NUT 10-24
57-1	XPS06	PHLP HD SCREW 10-24 X 3/8
57-2	XPSB05	CAP SCREW 1/4-20 X 3/4
58	XPTLW02M	EXT TOOTH WASHER 5MM
59	X1740059	SPECIAL BOLT
60	X1740060	BUSHING SUPPORT
61	X1740061	PLATE
64	X1740064	DRIVE ROLLER
64-1	X1740064-1	IDLER ROLLER
65-1	X1740065-1	TABLE
65-2	XPFH12	FLT HD SCREW 1/4-20 X 1
66	X1740066	CONVEYOR BELT
69	X1740069	PRESSURE ROLLER
70	X1740070	SANDING DRUM
71	XPR08M	EXT RETAINING RING 19MM
73	X1740073	BUSHING
74	X1740074	SCALE POINTER
77	XPS06	PHLP HD SCREW 10-24 X 3/8
79	XPW03	FLAT WASHER #10
80	X1740080	PILLOW BLOCK BEARING
81	X1740081	SETSCREW 5/16-24 X 1/2
82	XPW02	FLAT WASHER 3/8
85	XPLN01	LOCK NUT 3/8-16
87	X1740087	COMPRESSION SPRING
88	XPB51	HEX BOLT 1/4-20 X 3/8
89	XPW06	FLAT WASHER 1/4
89-1	X1740089-1	BRACKET
90	X1740090	HOOK & LOOP SANDBELT
92	X1740092	HOOK & LOOP DRUM COVER
93	X1740093	DRUM PULLEY
94	XPVA36	V-BELT A-36 4L360
98	XPAW03M	HEX WRENCH 3MM
99	X1740099	FRAME

Parts List

REF	PART #	DESCRIPTION
100	X1740100	WORM GEAR SHAFT BRACKET
101	XPLN02	LOCK NUT 1/4-20
102	X1740102	SHAFT MOUNT
103	X1740103	PINION GEAR
104	X1740104	BUSHING
107	XPB19	HEX BOLT 1/4-20 X 1/2
108	X1740108	COLLAR
109	X1740109	GEAR COVER
112	X1740112	CRANK HANDLE
113	X1740113	HANDLE
114	XPN08	HEX NUT 3/8-16
115	XPW07	FLAT WASHER 5/16
117	XPB03	HEX BOLT 5/16-18 X 1

REF	PART #	DESCRIPTION
118	XPSS11	SETSCREW 1/4-20 X 1/4
119	X1740119	DUST SCOOP
120	X1740210	KNOB 1/4-20 X 3/4
121	X1740121	SHOP FOX LOGO PLATE
122	X1740122	DATA LABEL
123	XLABEL02B	LABEL (DISCONNECT POWER)
124	XLABEL06	LABEL (GLASSES/RESPIRATOR)
125	XLABEL08	LABEL (READ MANUAL)
126	XLABEL13	LABEL (CONVEYOR PINCH)
127	XLABEL12	LABEL (SANDER KICKBACK)
128	X1740128	TAPE (BLACK/TAN TRIM)
129	X1740129	LABEL (ELECTRICITY)
130	X1740130	W1740 CREAM-COLOR PAINT

Notes

Warranty

Woodstock International, Inc. warrants all **SHOP FOX**[®] 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**[®] 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**[®] 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**[®] 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.



Warranty Registration

Name _____
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 Model # _____ Serial # _____ Dealer Name _____ Purchase Date _____

The following information is given on a voluntary basis. It will be used for marketing purposes to help us develop better products and services. **Of course, all information is strictly confidential.**

1. How did you learn about us?

<input type="checkbox"/> Advertisement	<input type="checkbox"/> Friend	<input type="checkbox"/> Local Store
<input type="checkbox"/> Mail Order Catalog	<input type="checkbox"/> Website	<input type="checkbox"/> Other:

2. How long have you been a woodworker/metalworker?

<input type="checkbox"/> 0-2 Years	<input type="checkbox"/> 2-8 Years	<input type="checkbox"/> 8-20 Years	<input type="checkbox"/> 20+ Years
------------------------------------	------------------------------------	-------------------------------------	------------------------------------

3. How many of your machines or tools are Shop Fox®?

<input type="checkbox"/> 0-2	<input type="checkbox"/> 3-5	<input type="checkbox"/> 6-9	<input type="checkbox"/> 10+
------------------------------	------------------------------	------------------------------	------------------------------

4. Do you think your machine represents a good value? Yes No

5. Would you recommend Shop Fox® products to a friend? Yes No

6. What is your age group?

<input type="checkbox"/> 20-29	<input type="checkbox"/> 30-39	<input type="checkbox"/> 40-49
<input type="checkbox"/> 50-59	<input type="checkbox"/> 60-69	<input type="checkbox"/> 70+

7. What is your annual household income?

<input type="checkbox"/> \$20,000-\$29,000	<input type="checkbox"/> \$30,000-\$39,000	<input type="checkbox"/> \$40,000-\$49,000
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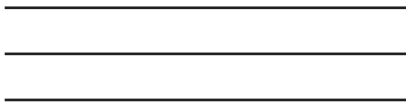
8. Which of the following magazines do you subscribe to?

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<input type="checkbox"/> Hand Loader	<input type="checkbox"/> Popular Woodworking	<input type="checkbox"/> Wooden Boat
<input type="checkbox"/> Handy	<input type="checkbox"/> Practical Homeowner	<input type="checkbox"/> Woodshop News
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<input type="checkbox"/> Model Airsand News	<input type="checkbox"/> Rifle	<input type="checkbox"/> Woodworker's Journal
<input type="checkbox"/> Modeltec	<input type="checkbox"/> Shop Notes	<input type="checkbox"/> Other:
<input type="checkbox"/> Old House Journal	<input type="checkbox"/> Shotgun News	

9. Comments: _____

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