

# MODEL W1677/W1711 SERIES LEFT-TILT TABLE SAW



*W1677EXT1 Shown*

## OWNER'S MANUAL

Phone: (360) 734-3482 • Online Technical Support: [tech-support@shopfox.biz](mailto:tech-support@shopfox.biz)

COPYRIGHT © JULY, 2002 BY WOODSTOCK INTERNATIONAL, INC. REVISED MAY, 2007 (TR).

WARNING: NO PORTION OF THIS MANUAL MAY BE REPRODUCED IN ANY SHAPE OR FORM WITHOUT

THE WRITTEN APPROVAL OF WOODSTOCK INTERNATIONAL, INC.





## **WARNING!**

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

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

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

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



## **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.



# Table of Contents

<b>INTRODUCTION</b> .....	<b>2</b>	<b>MAINTENANCE</b> .....	<b>38</b>
Woodstock Technical Support .....	2	V-Belts .....	38
W1677 Series Specifications .....	3	Cleaning .....	38
W1711 Series Specifications .....	4	Table & Base .....	38
Controls and Features .....	5	Lubrication .....	38
<b>SAFETY</b> .....	<b>6</b>	<b>SERVICE</b> .....	<b>39</b>
Standard Safety Instructions .....	6	General .....	39
Specific Safety Instructions for Table Saws ..	8	Blade Tilt Stop Bolts .....	39
Avoiding Potential Injuries .....	9	Blade Alignment .....	40
Kickback .....	11	Miter Slot Parallel to Blade .....	41
Common Terms .....	12	Shimming Wings .....	42
<b>ELECTRICAL</b> .....	<b>13</b>	Splitter Adjustment .....	43
220V Operation .....	13	Angle Pointer .....	44
Extension Cords .....	13	Miter Gauge .....	44
Grounding .....	13	Replacing V-Belts .....	45
<b>SETUP</b> .....	<b>14</b>	Adjusting Fence .....	45
Unpacking .....	14	W1677 Wiring Diagram .....	46
Inventory .....	14	W1711 Wiring Diagram .....	47
Shop Fox Classic Fence Inventory .....	15	Troubleshooting .....	48
Shop Fox Original Fence Inventory .....	16	<b>PARTS</b> .....	<b>50</b>
Machine Placement .....	17	Table/Body Breakdown .....	50
Cleaning Machine .....	17	Motor/Trunnion Breakdown .....	52
Mobile Base .....	18	Guard/Miter Gauge Breakdown .....	54
Assembly .....	18	<b>Warranty</b> .....	<b>56</b>
Test Run .....	22		
<b>OPERATIONS</b> .....	<b>23</b>		
General .....	23		
Blade Height .....	23		
Feed Rate .....	23		
Blade Selection .....	24		
Changing Blades .....	25		
Through vs. Non-Through Cuts .....	26		
Rip Cuts .....	27		
Blade Tilt/Bevel Cuts .....	27		
Cross Cuts .....	28		
Miter Cuts .....	28		
Dado Cuts .....	29		
Rabbet Cuts .....	31		
Resawing .....	33		
Aftermarket Safety Accessories .....	36		
Shop-Made Safety Accessories .....	37		







# INTRODUCTION

## Woodstock Technical Support

Your new **SHOP FOX®** machine 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.

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

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

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

Woodstock International, Inc.  
Attn: Technical Documentation Manager  
P.O. Box 2309  
Bellingham, WA 98227  
Email: [manuals@woodstockint.com](mailto:manuals@woodstockint.com)



# W1677 Series Specifications

Model Number	W1677	W1677EXT1	W1677EXT2
Motor	3 HP	3 HP	3 HP
Voltage	220V	220V	220V
Phase	Single-Phase	Single-Phase	Single-Phase
Amps	18	18	18
Speed	3450 RPM	3450 RPM	3450 RPM
Table Size (full assembly)	40 <sup>1</sup> / <sub>8</sub> " x 27"	84 <sup>1</sup> / <sub>8</sub> " x 27"	84 <sup>1</sup> / <sub>8</sub> " x 27"
Table Height	34"	34"	34"
Overall Machine Size	56"L x 34"W	84"L x 34"W	84"L x 34"W
Footprint Size	20 <sup>1</sup> / <sub>2</sub> "L x 20 <sup>1</sup> / <sub>2</sub> "W	20 <sup>1</sup> / <sub>2</sub> "L x 20 <sup>1</sup> / <sub>2</sub> "W	20 <sup>1</sup> / <sub>2</sub> "L x 20 <sup>1</sup> / <sub>2</sub> "W
Weight	410 lbs.	500 lbs.	500 lbs.
Fence	Shop Fox Classic	Shop Fox Classic	Shop Fox Original
Long Rails & Extension Table	No	Yes	Yes
Maximum Rip Right of Blade	26"	52"	49"
Maximum Rip Left of Blade	8"	8"	8"
Maximum Depth of Cut at 90°	3"	3"	3"
Maximum Depth of Cut at 45°	2 <sup>1</sup> / <sub>8</sub> "	2 <sup>1</sup> / <sub>8</sub> "	2 <sup>1</sup> / <sub>8</sub> "
Maximum Blade Diameter	10"	10"	10"
Arbor Size	5/8"	5/8"	5/8"
Arbor Speed	4200 RPM	4200 RPM	4200 RPM
Rim Speed	11,000 FPM	11,000 FPM	11,000 FPM
Blade Tilt (Left)	0° - 45°	0° - 45°	0° - 45°
Maximum Dado Width	13/16"	13/16"	13/16"
Miter Slot Size	3/4"W x 3/8"H	3/4"W x 3/8"H	3/4"W x 3/8"H
Dust Port Size	4"	4"	4"
Country of Origin	Taiwan	Taiwan	Taiwan
Assembly Time (approx.)	60 Minutes	90 Minutes	90 Minutes
Warranty	2 Year	2 Year	2 Year





# W1711 Series Specifications

Model Number	W1711	W1711EXT	W1711EXT1	W1711EXT2
Motor	5 HP	5 HP	5 HP	5 HP
Voltage	220V	220V	220V	220V
Phase	Single-Phase	Single-Phase	Single-Phase	Single-Phase
Amps	25	25	25	25
Speed	3450 RPM	3450 RPM	3450 RPM	3450 RPM
Table Size (full assembly)	40 <sup>1</sup> / <sub>8</sub> " x 27"	84 <sup>1</sup> / <sub>8</sub> " x 27"	84 <sup>1</sup> / <sub>8</sub> " x 27"	84 <sup>1</sup> / <sub>8</sub> " x 27"
Table Height	34"	34"	34"	34"
Overall Machine Size	56"L x 34"W	84"L x 34"W	84"L x 34"W	84"L x 34"W
Footprint Size	20 <sup>1</sup> / <sub>2</sub> "L x 20 <sup>1</sup> / <sub>2</sub> "W	20 <sup>1</sup> / <sub>2</sub> "L x 20 <sup>1</sup> / <sub>2</sub> "W	20 <sup>1</sup> / <sub>2</sub> "L x 20 <sup>1</sup> / <sub>2</sub> "W	20 <sup>1</sup> / <sub>2</sub> "L x 20 <sup>1</sup> / <sub>2</sub> "W
Weight	410 lbs.	500 lbs.	500 lbs.	500 lbs.
Fence	Shop Fox Classic	Shop Fox Classic	Shop Fox Classic	Shop Fox Original
Long Rails & Extension Table	No	Yes	Yes	Yes
Included Mobile Base	No	No	Yes	Yes
Included Steelex Blade	No	No	Yes	Yes
Maximum Rip Right of Blade	26"	52"	52"	49"
Maximum Rip Left of Blade	8"	8"	8"	8"
Maximum Depth of Cut at 90°	3"	3"	3"	3"
Maximum Depth of Cut at 45°	2 <sup>1</sup> / <sub>8</sub> "	2 <sup>1</sup> / <sub>8</sub> "	2 <sup>1</sup> / <sub>8</sub> "	2 <sup>1</sup> / <sub>8</sub> "
Maximum Blade Diameter	10"	10"	10"	10"
Arbor Size	5/8"	5/8"	5/8"	5/8"
Arbor Speed	4200 RPM	4200 RPM	4200 RPM	4200 RPM
Rim Speed	11,000 FPM	11,000 FPM	11,000 FPM	11,000 FPM
Blade Tilt (Left)	0° - 45°	0° - 45°	0° - 45°	0° - 45°
Maximum Dado Width	13/16"	13/16"	13/16"	13/16"
Miter Slot Size	3/4"W x 3/8"H	3/4"W x 3/8"H	3/4"W x 3/8"H	3/4"W x 3/8"H
Dust Port Size	4"	4"	4"	4"
Country of Origin	Taiwan	Taiwan	Taiwan	Taiwan
Assembly Time (approx.)	60 Minutes	90 Minutes	90 Minutes	90 Minutes
Warranty	2 Year	2 Year	2 Year	2 Year



## Controls and Features

Take time to acquaint yourself with the controls of your new table saw. They will be mentioned frequently throughout the instructions in this manual, and the better you know your machine, the better you can make it perform. **Figures 1 and 2** point out the key controls and their locations.

For complete details regarding the controls of the Shop Fox Classic fence, refer to the manual included with the fence.

For complete details regarding the extension tables, refer to the manual included with those tables.

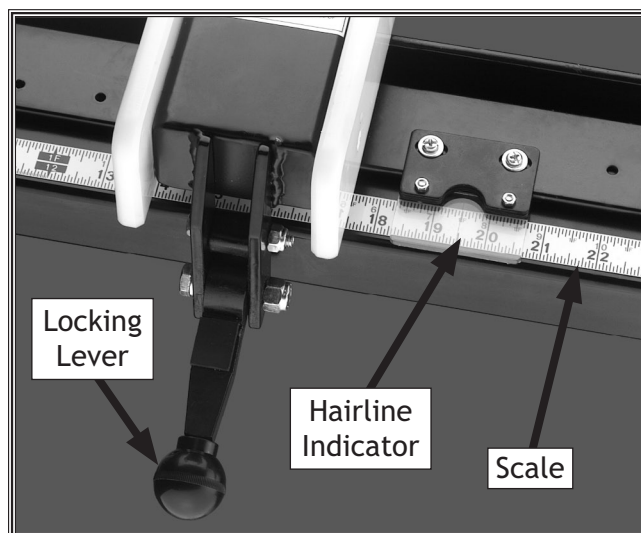


Figure 1. Fence controls.

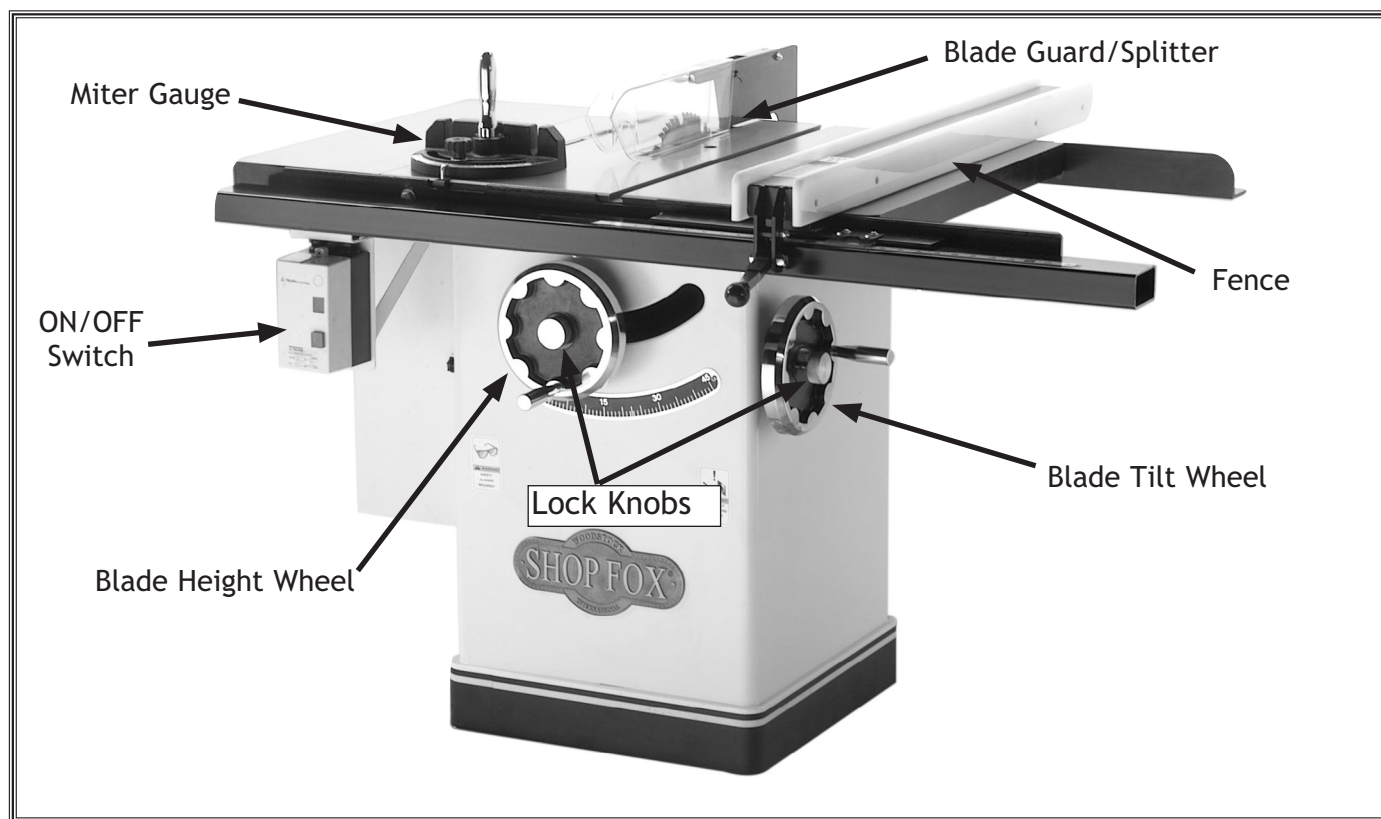


Figure 2. Machine controls.



# SAFETY

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

## **DANGER**

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

## **WARNING**

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

## **CAUTION**

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 NIOSH 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.

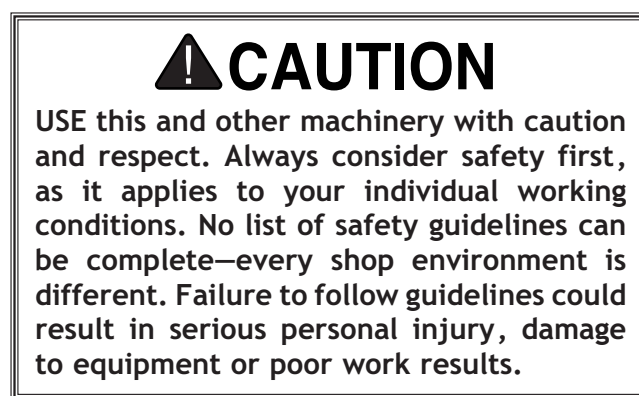
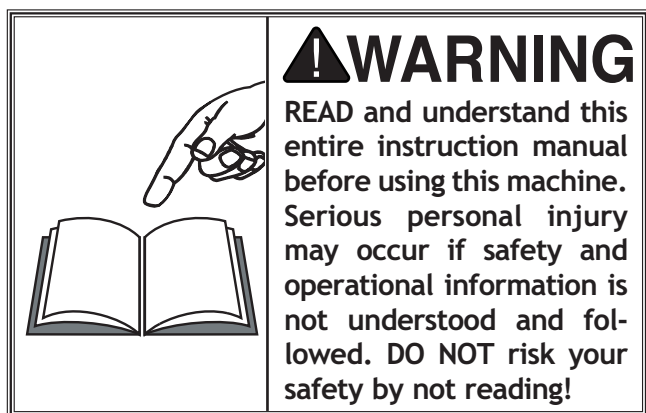


10. **NEVER LEAVE WHEN MACHINE IS RUNNING.** Turn power off and allow all moving parts to come to a complete stop before leaving machine unattended.
11. **DO NOT USE IN DANGEROUS ENVIRONMENTS.** DO NOT use machinery in damp, wet locations, or where any flammable or noxious fumes may exist.
12. **KEEP 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 over-heat 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. **BE AWARE THAT CERTAIN DUST MAY BE HAZARDOUS** to the respiratory systems of people and animals, especially fine dust. Make sure you know the hazards associated with the type of dust you will be exposed to and always wear a respirator approved for that type of dust.



# Specific Safety Instructions for Table Saws

## SAFETY



1. **Always** use guard, splitter and anti-kickback pawls on all "through-sawing" operations. Through-sawing operations are those when the blade cuts completely through the workpiece as in ripping or crosscutting.
2. **Always** hold the work firmly against the miter gauge or the fence when cutting.
3. **Always** use a push-stick for ripping narrow stock.
4. **Never** perform any operation "free-hand" which means using only your hands to support or guide the workpiece. Always use either the fence or the miter gauge to position and guide the work.
5. **Never** stand or have any part of your body in line with the path of the saw blade.
6. **Never** reach behind or over the blade with either hand for any reason.
7. **Move** the rip fence out of the way when crosscutting with the miter gauge.
8. **Always** use multiple light passes when cutting deep non-through cuts.
9. **Never** attempt to free a stalled saw blade without first turning the saw *OFF*.
10. **Provide** adequate support to the rear and sides of the saw table for wide or long workpieces.
11. **Avoid kickbacks.** A condition in which a piece of wood is thrown back towards an operator at a high rate of speed. Usually is caused by the stock becoming trapped between the stationary face of the rip fence and the rotating side of the saw blade. Do not operate the machine until you know what a kickback is and how to avoid it.
12. **Avoid** awkward operations and hand positions where a sudden slip could cause your hand to move into the blade.
13. **Avoid** cutting warped stock or stock that may contain loose knots, nails or any other defects. These conditions may cause kickback.



## Avoiding Potential Injuries



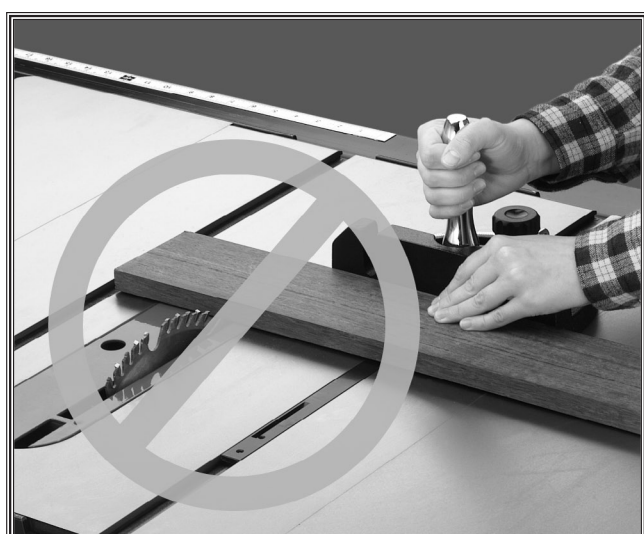
**Figure 3.** Unplug saw before changing blades.



**Figure 5.** Do not freehand cuts.



**Figure 4.** Never use the rip fence as a guide when cutting with the miter gauge.



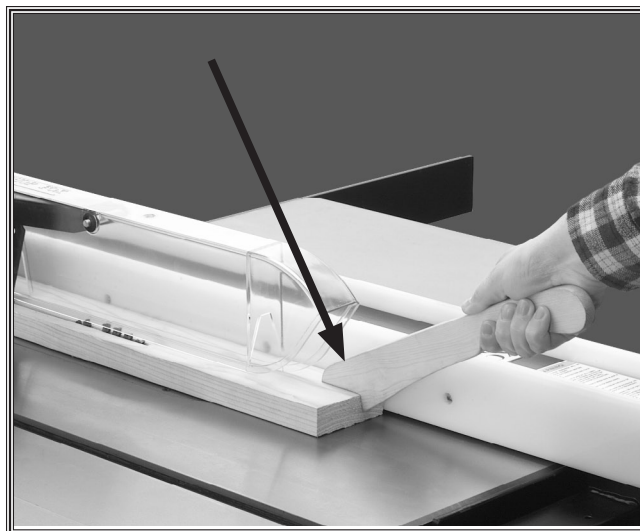
**Figure 6.** Do not make through cuts without the blade guard/splitter in place.



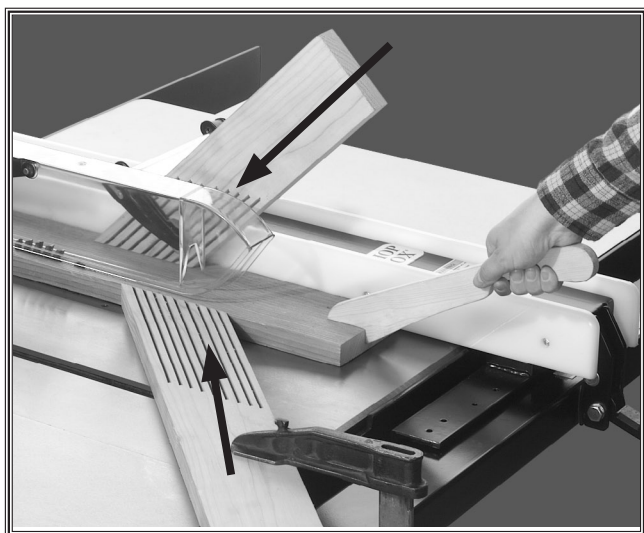
## Avoiding Potential Injuries



**Figure 7.** Do not make unstable cuts.



**Figure 9.** Use a push stick when ripping narrow pieces.



**Figure 8.** Use featherboards when possible to protect against kickback.



**Figure 10.** Do not stand directly behind blade when making a cut.



## Kickback

Kickback occurs when the blade launches the workpiece toward the front of the saw. This happens so quickly the operator rarely has time to respond. He or she can be killed, severely hurt or have his/her hand forced into the moving blade. Kickback is one of the most serious dangers that can occur with a table saw. In order to protect yourself from kickback, it is essential to educate yourself about why and how it happens. Below is a list of ways to protect yourself from kickback.

- **Do not stand directly behind the workpiece.** Should a kickback occur, the workpiece may be launched at a high rate of speed in the direction from which it came. If you are standing behind the workpiece, it will hit you. Instead, stand off to the side in a location where you are still able to maintain total control.
- **Do not use the rip fence as a guide when crosscutting with the miter gauge.** The workpiece may pinch the blade, causing kickback. Use the miter gauge and the rip fence by themselves—never together.
- **Only use sharp, clean blades.** Sharp blades will cut the material easier, reducing the chance that the blade will get jammed up while cutting the workpiece. Always replace or sharpen your dull blades. Blades covered in resin are just as likely to cause kickback as a dull blade.
- **Never freehand a cut with the table saw.** The small twists or turns that are inherent with freehand cuts will cause kickback.
- **Keep your table saw clean.** Buildup of wood chips or dust, or any other objects that may obstruct an otherwise smooth cut, has the potential to cause kickback.
- **Cutting warped stock or stock with loose knots, nails, or other defects will cause kickback.**
- **Do not reach behind the blade to pull the workpiece through the cut.** In the event of a kickback, your hand may be pulled into the moving blade.
- **Use push sticks or push paddles whenever possible.** Using one or two push sticks when ripping can decrease operator injury in the event of kickback. Push sticks and push paddles create a barrier between your hands and the workpiece.
- **Be aware that small cutoff pieces are easily kickbacked if loose near the blade.** Use a zero-clearance table insert whenever possible.
- **Always use the blade guard/splitter when making through-cuts.** The blade splitter has anti-kickback pawls that dig into the workpiece in the event of a kickback. Removing the guard/splitter greatly increases the risk of danger from kickback.
- **Always feed material into the blade at the proper feed rate.** Feeding material into the blade too fast may cause a kickback. Listen to the blade and the motor during a cut. If either one is struggling, decrease the feed rate.
- **Consider aftermarket or shop-made accessories to increase your level of safety.** Many of these items are designed to stop the board during a kickback or reduce the chance of kickback by stabilizing the board during a cut.



# Common Terms

In order to increase user safety awareness and understanding, we have provided a list of common terms associated with table saws. We will refer to many of these terms throughout this manual, so the time you spend learning these terms will result in an increased knowledge of table saw applications.

## Arbor

The shaft underneath the table on which the blade mounts.

## Bevel

An angled cut on the edge of a board that reaches both faces of the board.

## Crosscut

To cut across the grain of a piece of stock.

## Dado

A slot cut partially through the thickness of the stock either with or against the grain.

## Feed Rate

The speed at which the stock is pushed into the moving blade.

## Flush

A condition when two or more surfaces are perfectly flat and parallel to each other, so that their touching edges have an even surface.

## Kerf

The width of the material that a blade removes from the workpiece.

## Kickback

The event in which the stock is ejected from the blade at a high rate of speed toward the operator. Usually caused by binding the blade or by a blade condition that forces the momentum of the blade to push the stock away.

## Miter Cut

An angled cut across the face or end of a board. Usually cut to match another board of a corresponding angle so that each cut piece fits perfectly into the other, thus changing the direction of the workpiece.

## Non Through-Cut

A cut that does not pass through the top of the workpiece—i.e. a dado or rabbet cut. This type of cut is more dangerous than a through cut because it requires the operator to remove the blade guard/splitter assembly.

**Examples:**

**Dado Cutting: Page 29**

**Rabbet Cutting: Page 31**

**Resawing: Page 33**

## Outfeed Side

The opposite side of the table that the workpiece is fed into the blade. Usually supplemented with an aftermarket or shop-made table to catch a freshly cut workpiece.

## Positive Stop

A bolt or pin that can be adjusted to stop a moving part at a predetermined location. This table saw has positive stops for tilting the blade.

## Rabbet

An L-shaped cut along the edge of a workpiece.

## Rip Cut

To cut along the grain of stock (see **Page 27**).

## Straightedge

An object with a perfectly straight edge that is used to compare against another object to determine whether it is straight.

## Through-Cut

A cut that passes completely through the top of the workpiece. The blade guard **MUST** be installed for safest operation.

**Examples:**

**Rip Cuts: Page 27**

**Crosscutting: Page 28**

**Miter Cuts: Page 28**

**Blade Tilt/Bevel Cuts: Page 27**



# ELECTRICAL

## 220V Operation

The Model W1677/W1711 is prewired for 220V operation. Always connect this machine to a dedicated circuit with a verified ground, using the recommended circuit size and power connection method stated below.

Never replace a circuit breaker with one of higher amperage without consulting a qualified electrician to ensure compliance with wiring codes. If you are unsure about the wiring codes in your area or 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 with your machine. If you have no other choice, use the following guidelines:

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

## Grounding

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

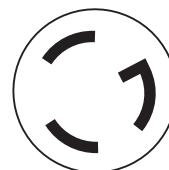
### WARNING

Electrocution or severe shock could occur if machine is not grounded.

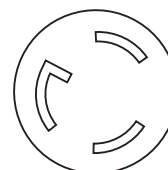


### CAUTION

Replacing an existing circuit breaker with one rated for higher amperage may result in a fire. Get help from an electrician if your circuit is too small for the machine.



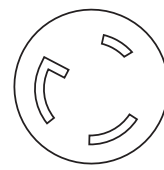
L6-20 P



L6-20 R



L6-30 P



L6-30 R

Figure 11. Plug & receptacle examples.

Model	Operating Voltage	Amp Draw	Min. Circuit Size	Plug/Receptacle	Extension Cord
W1677 Series	220V	18 Amps	20A	NEMA L6-20	12 Gauge
W1711 Series	220V	25 Amps	30A	NEMA L6-30	8 Gauge



# SETUP

## Unpacking

Your new table saw has been carefully packaged for safe transporting. When unpacking, remove the red shipping braces that hold the saw to the pallet. 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 in the table saw box. 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 (Figures 12 & 13)	Qty
A. Saw Base Unit .....	1
B. Extension Wings .....	2
C. Cabinet Cover .....	1
D. Lock Knob .....	1
E. Handwheel .....	1
F. Miter Gauge .....	1
G. Blade Guard/Splitter .....	1
H. Dado Table Insert .....	1
I. Standard Table Insert .....	1
J. Dust Port .....	1
K. Arbor Wrench .....	1
L. Support Shaft .....	1
M. Blade Guard Brackets .....	2
N. Handwheel Handle .....	1
O. Switch Support Bracket .....	1

Hardware and Tools	Qty
• Flat Head Screw $\frac{5}{16}$ "-18 x 1" (Switch Bracket) .....	1
• Flat Washer $\frac{5}{16}$ " (Switch Bracket) .....	1
• Hex Nut $\frac{5}{16}$ "-18 (Switch Bracket) .....	1
• Tap Screws 10-24 x $\frac{3}{8}$ " (Dust Port) .....	4
• Set Screws $\frac{5}{16}$ "-18 x $\frac{3}{8}$ " (Brackets on Shaft) .....	2
• Hex Bolt $\frac{5}{16}$ "-18 x $1\frac{1}{2}$ " (Brackets on Shaft) .....	2
• Flat Washers $\frac{5}{16}$ " (Brackets on Shaft) .....	4
• Lock Washers $\frac{5}{16}$ " (Brackets on Shaft) .....	2
• Hex Nuts $\frac{5}{16}$ "-18 (Brackets on Shaft) .....	2
• Hex Bolts $\frac{5}{16}$ "-18 x 1" (Guard/Splitter Install) .....	2
• Flat Washers $\frac{5}{16}$ " (Guard/Splitter Install) .....	2
• Hex Wrenches 3, 4, 8mm .....	1 each
• Flat Wrench .....	1

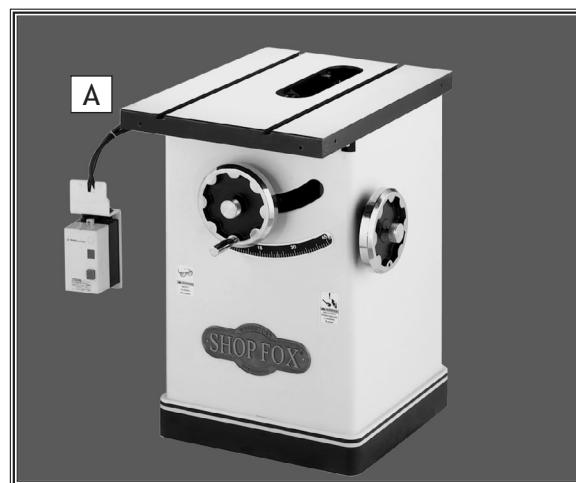


Figure 12. Saw base unit.

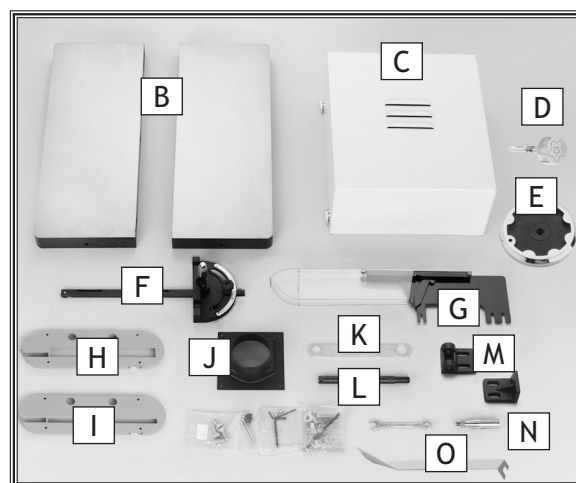


Figure 13. Table saw loose parts.



# Shop Fox Classic Fence Inventory

Depending on which model you purchased, your saw will come with standard length rails or with long rails. The Shop Fox Classic fence includes extra hardware for mounting it to other brands of table saws.

The inventory list below and **Figures 14 & 15** show only the hardware needed to mount the fence to your saw. To avoid confusion, we suggest removing any items not listed here from your immediate work area.

## Inventory Needed for Your Saw

Standard Rails (Figure 14):	Qty
A. Fence Assembly.....	1
B. Front Rail 46 <sup>1</sup> / <sub>2</sub> " .....	1
C. Back Rail 46 <sup>1</sup> / <sub>2</sub> " .....	1
D. Front Rail Rectangular Tube 54" .....	1
E. Scale .....	1

Long Rails (Figure 15):	Qty
A. Front Rail Rectangular Tube 84" .....	1
B. Extension Table.....	1
C. Legs.....	2
D. Feet.....	2
E. Front Rail 72" .....	1
F. Back Rail 72" .....	1
G. Fence Assembly.....	1
H. Leg Braces .....	2
I. Scale.....	1

### Common Rail/Table Mounting Hardware:

- Hex Bolts <sup>3</sup>/<sub>8</sub>-16 x 1" (Rail/Table)..... 4
- Flat Washers <sup>3</sup>/<sub>8</sub>" (Rail/Table)..... 4
- Hex Bolts <sup>1</sup>/<sub>4</sub>-20 x <sup>3</sup>/<sub>4</sub>" (Rail/Tube)..... 4
- Flat Washers <sup>1</sup>/<sub>4</sub>" (Rail/Tube)..... 4

### Additional Hardware Only for Long Rail Setup:

- Hex Bolts <sup>1</sup>/<sub>4</sub>-20 x <sup>3</sup>/<sub>4</sub>" (Rail/Tube)..... 3
- Flat Washers <sup>1</sup>/<sub>4</sub>" (Rail/Tube)..... 3
- Hex Bolts <sup>3</sup>/<sub>8</sub>"-16 x 1<sup>3</sup>/<sub>4</sub>" (Rail/Ext Table).. 8
- Flat Washers <sup>3</sup>/<sub>8</sub>" (Rail/Ext Table) .....16
- Hex Nuts <sup>3</sup>/<sub>8</sub>"-16 (Rail/Ext Table) ..... 8
- Hex Nuts <sup>1</sup>/<sub>2</sub>" (Feet Jam Nuts)..... 2
- Wood Screws <sup>1</sup>/<sub>4</sub>" x <sup>3</sup>/<sub>4</sub>" (Brace/Ext Table) 2
- Fender Washers <sup>1</sup>/<sub>4</sub>" (Brace/Ext Table) .... 2
- Hex Bolts <sup>3</sup>/<sub>8</sub>"-16 x <sup>3</sup>/<sub>4</sub>" (Brace/Leg) ..... 2
- Flat Washers <sup>3</sup>/<sub>8</sub>" (Brace/Leg) ..... 2
- Flat Washers <sup>3</sup>/<sub>8</sub>" (Spacers for Brace/Leg). 8
- Wood Screws #8 x <sup>3</sup>/<sub>4</sub>" (Leg/Ext Table) ...12

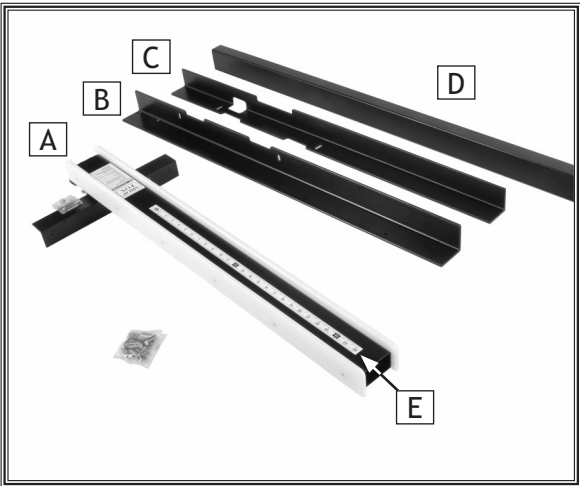


Figure 14. Classic fence inventory for standard rails.

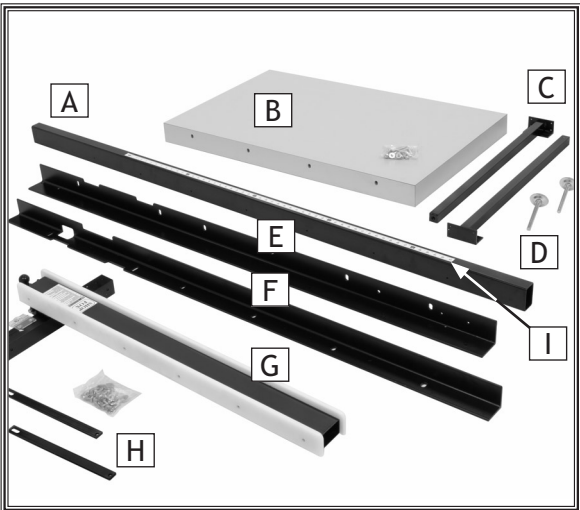


Figure 15. Classic fence inventory for long rails.

SETUP



# Shop Fox Original Fence Inventory

Depending on which model you purchased, your saw will come with standard length rails or long rails. The Shop Fox Original fence includes extra hardware for mounting it to other brands of table saws.

The inventory list below and **Figures 16 & 17** show only the hardware needed to mount the fence to your saw. To avoid confusion, we suggest removing any items not listed here from your immediate work area. The hardware list below is categorized by application.

## Inventory Needed for Your Saw

### Standard Rails (Figure 16):

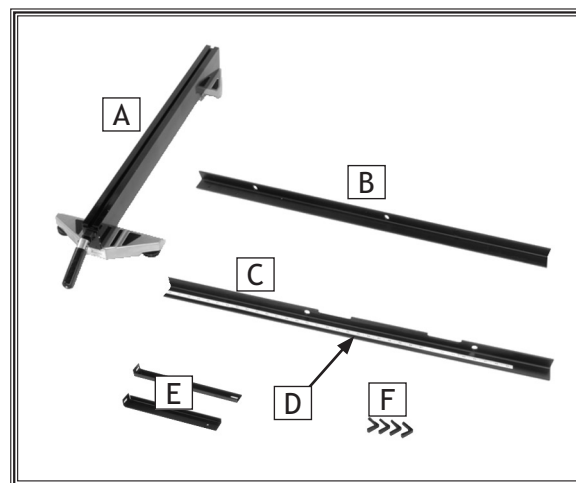
	Qty
A. Shop Fox Original Fence.....	1
B. Front Rail .....	1
C. Rear Rail .....	1
D. Scale.....	1
E. End Braces.....	2
F. Rail End Covers .....	4

### Long Rails (Figure 17):

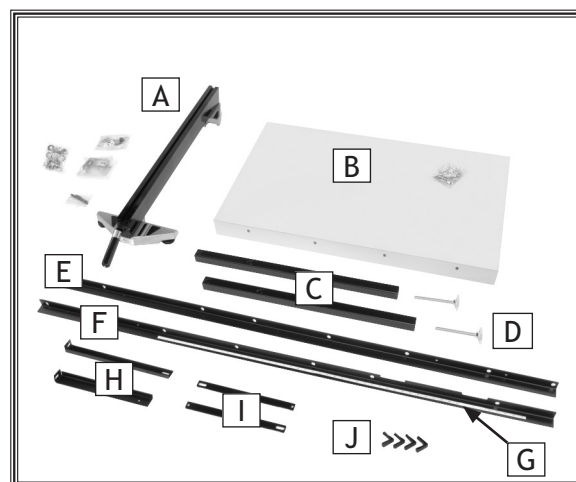
	Qty
A. Shop Fox Original Fence.....	1
B. Extension Table.....	1
C. Legs.....	2
D. Feet.....	2
E. Front Rail 72" .....	1
F. Back Rail 72" .....	1
G. Scale.....	1
H. End Braces.....	2
I. Table Leg Braces .....	2
J. Rail End Covers .....	4

### Common Rail/Table Mounting Hardware:

- Hex Bolts  $\frac{3}{8}$ "-16 x 1" (R Rail/Main Table).. 2
- Low Profile Hex Bolts  $\frac{3}{8}$ "-16 x 1" (F Rail/Main Table) ..... 2
- Flat Washers  $\frac{3}{8}$ " (Rail/Main Table) ..... 8
- Hex Bolts  $\frac{3}{8}$ "-16 x 1" (End Braces) ..... 2
- Flat Washers  $\frac{3}{8}$ " (End Braces) ..... 2
- Hex Nuts  $\frac{3}{8}$ "-16 (End Braces) ..... 2
- Flat Hd Screw  $\frac{1}{4}$ "-20 x  $\frac{5}{8}$ " (End Braces) .. 1
- Flat Washer  $\frac{1}{4}$ " (End Braces) ..... 1
- Hex Nut  $\frac{1}{4}$ "-20 (End Braces) ..... 1
- Fence Stop..... 1
- Phlp Hd Screw 10-24 x  $\frac{5}{8}$ "..... 1
- Flat Washer #10 ..... 1



**Figure 16.** Original fence inventory for standard fence rails.



**Figure 17.** Original fence inventory for long fence rails.

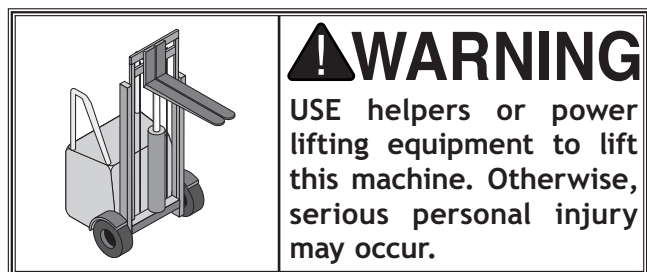
### Additional Hardware Only for Long Rails:

- Hex Bolts  $\frac{3}{8}$ "-16 x  $1\frac{3}{4}$ " (Rail/Ext Table).. 8
- Flat Washers  $\frac{3}{8}$ " (Rail/Ext Table) ..... 16
- Hex Nuts  $\frac{3}{8}$ "-16 (Rail/Ext Table) ..... 8
- Hex Nuts  $\frac{1}{2}$ " (Feet Jam Nuts)..... 2
- Wood Screws  $\frac{1}{4}$ " x  $\frac{3}{4}$ " (Brace/Ext Table) 2
- Fender Washers  $\frac{1}{4}$ " (Brace/Ext Table) .... 2
- Hex Bolts  $\frac{3}{8}$ "-16 x  $\frac{3}{4}$ " (Brace/Leg) ..... 2
- Flat Washers  $\frac{3}{8}$ " (Brace/Leg) ..... 2
- Flat Washers  $\frac{3}{8}$ " (Spacers for Brace/Leg). 8
- Wood Screws #8 x  $\frac{3}{4}$ " (Leg/Ext Table) ... 12



## Machine Placement

- **Floor Load:** This machine distributes a heavy load in a small footprint. Some floors may require additional bracing to support both machine and operator.
- **Working Clearances:** Consider the following when establishing a location for your machine:
  - Existing and anticipated needs
  - Size of material to be processed
  - Space for auxiliary stands, work tables or other machinery
  - Room to perform maintenance inside the cabinet.
- **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 high-traffic areas are clear of power cords. Follow local electrical codes for proper installation of new lighting, outlets, or circuits.

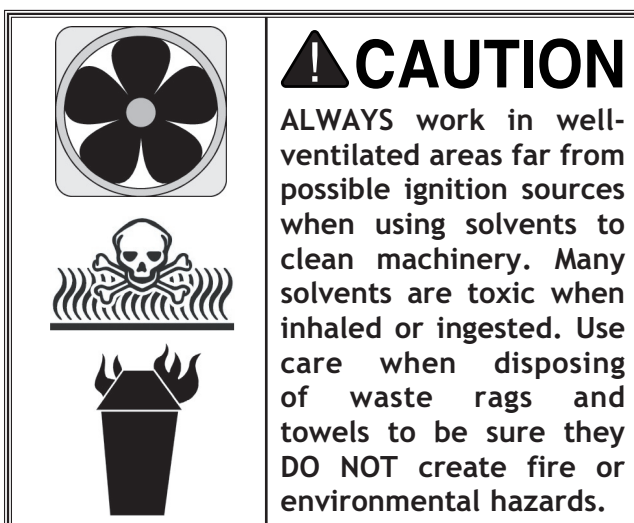
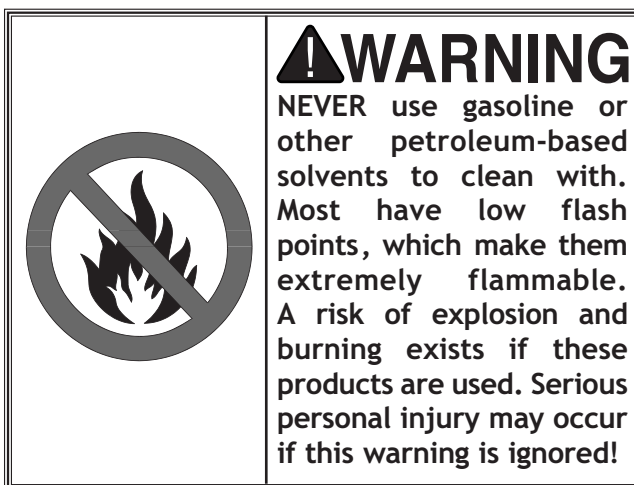


## Cleaning Machine

The unpainted parts of your machine type are coated with a shipping grease that protects them from corrosion during shipment. This coating does its job well, but requires a little elbow grease to remove.

The shipping grease can be cleaned off with a solvent, petroleum or citrus-based degreaser. DO NOT use chlorine-based solvents such as brake parts cleaner or acetone—if you happen to splash some onto a painted surface, you will ruin the finish.

Here is one easy and popular method for cleaning the shipping grease: Soak the grease in WD-40® or a similar product, wait five minutes, scrape most of the grease off with a plastic putty knife or other straight edge that won't scratch the cast iron, re-soak, then wipe down with a shop rag.





## Mobile Base

If your model includes a mobile base kit, or you plan to use an aftermarket mobile base kit for your saw, we recommend assembling the saw on the mobile base to avoid heavy/awkward lifting later.

Assemble your mobile base equipment as detailed in the instructions included with the mobile base, then put the saw base unit on the mobile base before continuing assembly.

## Assembly

You can mount the extension wings yourself, but it is easier with help.

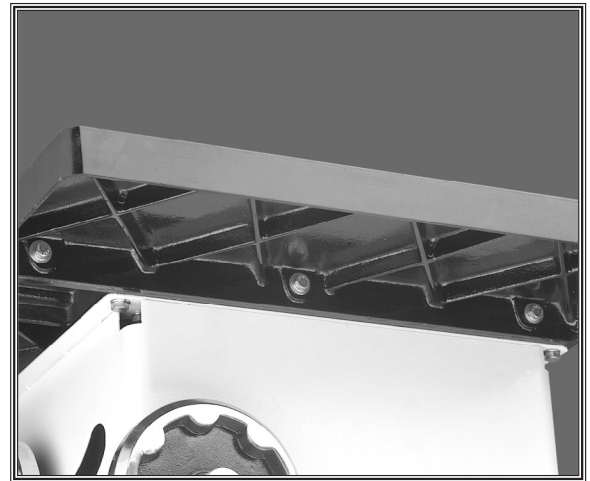
**Note:** If you have a model with long rails and an extension table, leave the right wing off to make room for the extension table.

To assemble your table saw, do these steps:

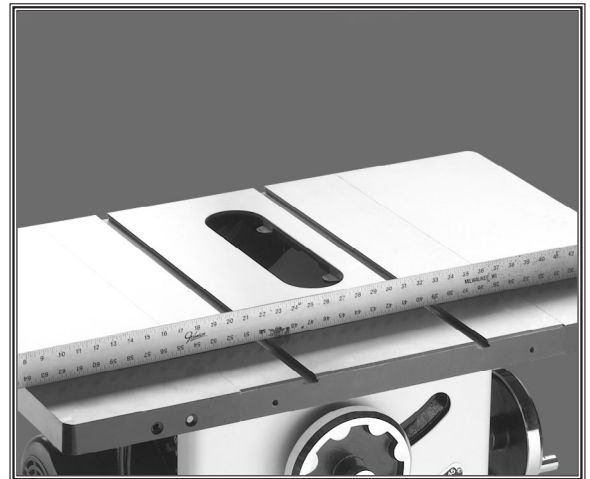
1. Using the fasteners that come pre-installed in the table, attach the extension wings to the table, as shown in **Figure 18**. Do not completely tighten the bolts at this point.
2. Place a straightedge across the table and the extension wings, and adjust each wing until it is flush with the table, then tighten the bolts underneath to secure the wing in place.
3. Check the overall flatness of the table and extension wing assembly with a straightedge, as shown in **Figure 19**.

**Note:** If an extension wing tilts up or down at the outside edges, shim it with masking tape or shim stock (refer to *Shimming Wings* on Page 42).

4. Attach the switch bracket to the backside of the left extension wing with the  $\frac{5}{16}$ "-18 x 1" Phillips flat head screw,  $\frac{5}{16}$ " flat washer, and  $\frac{5}{16}$ " nut, as shown in **Figure 20**.



**Figure 18.** Extension wing attached to table.



**Figure 19.** Checking overall table flatness with a straightedge.



**Figure 20.** Attaching switch to extension wing.



5. Mount the switch brace, as shown in **Figure 21**, using the table mounting fasteners on the top end and the switch mounting fasteners on the bottom end.



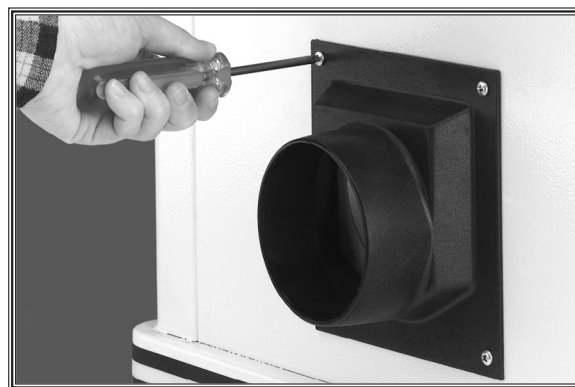
**Figure 21.** Switch brace installed.

6. Install the handwheel over the threads, screw the lock knob into the center, and attach the handle to the handwheel, as shown in **Figure 22**.



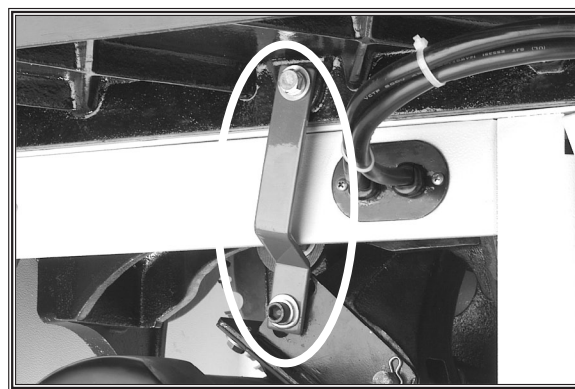
**Figure 22.** Installing handwheel, lock knob and handle.

7. Mount the dust port onto the cabinet stand with the four 10-24 x  $\frac{3}{8}$ " tap screws, as shown in **Figure 23**.



**Figure 23.** Installing dust port.

8. Remove the motor shipping brace, shown in **Figure 24**, then replace the fasteners that held the brace back into the hole from which they came.



**Figure 24.** Motor shipping brace.



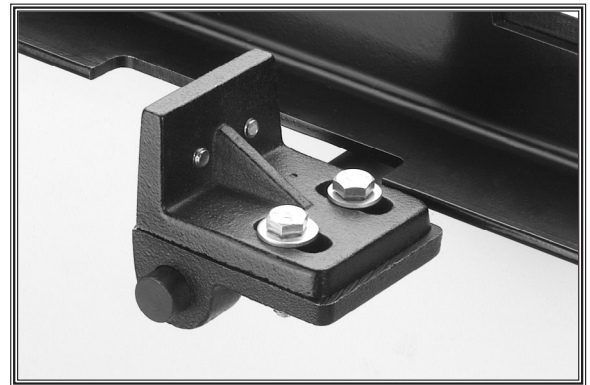
9. Install the blade by removing the arbor nut from the arbor and placing the blade on the arbor so the teeth face toward the front of the saw.
10. Hold the blade on the arbor with one hand and tighten the arbor nut on the arbor with the other.
11. Brace the blade with a scrap piece of wood, as shown in **Figure 25**, and tighten the arbor nut with the arbor wrench. *DO NOT overtighten the nut or it will be difficult to remove when you need to change your blades.*
12. Attach the fence as detailed in the instruction manual included with the fence.
13. Screw the splitter shaft into the tilt assembly through the back of the cabinet, as shown in **Figure 26**.
14. Slide the lower half of the bracket onto the splitter shaft and temporarily tighten the bracket to the shaft with the two  $\frac{5}{16}$ "-18 x  $\frac{3}{8}$ " set screws.
15. Place the upper blade guard bracket on the lower blade guard bracket and secure them with the two  $\frac{5}{16}$ "-18 x  $1\frac{1}{2}$ " bolts, four  $\frac{5}{16}$ " flat washers, two  $\frac{5}{16}$ " lock washers, and two  $\frac{5}{16}$ " hex nuts, as shown in **Figure 27**. Do not fully tighten the nuts yet.



**Figure 25.** Installing blade.



**Figure 26.** Installing the splitter shaft.

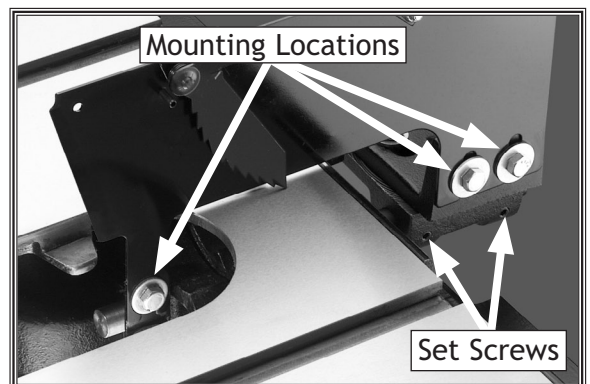


**Figure 27.** Blade guard bracket assembly installed on splitter shaft.

## ! WARNING

The blade guard/splitter greatly reduces the risk of injury when using this saw. You **MUST** install the blade guard/splitter before operating the machine.

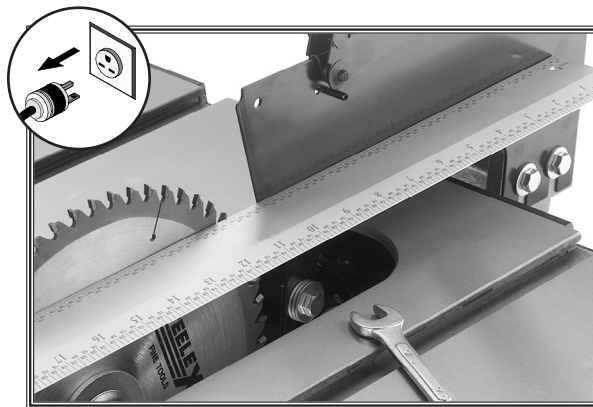
16. Attach the blade splitter/guard assembly at the mounting locations shown in **Figure 28**. Use the two  $\frac{5}{16}$ "-18 x 1" hex bolts and two  $\frac{5}{16}$ " flat washers from the inventory hardware to connect the splitter to the shaft bracket. Leave the mounting bolts just loose enough to slide the blade splitter on and off during alignment.



**Figure 28.** Blade splitter/guard assembly attached.

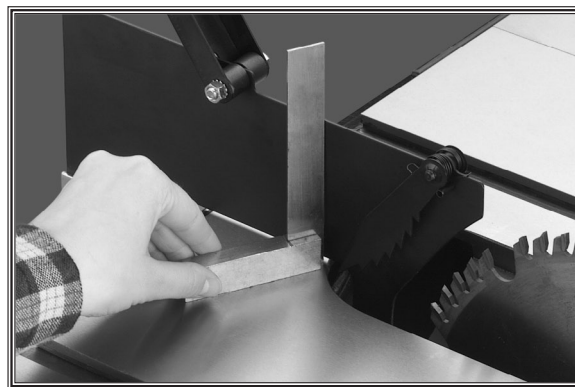


17. Raise the blade up to full height, and use a straight-edge to align the blade with the blade splitter, as shown in **Figure 29**.
18. At the front mounting location on the splitter, use the provided washers (or get thinner electrical washers) to shim between the splitter and the casting to take up any space, and tighten all the splitter mounting bolts.



**Figure 29.** Aligning splitter to blade.

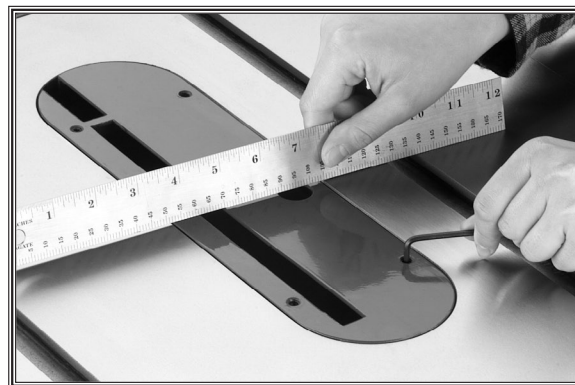
19. Loosen the set screws on the lower bracket half (see **Figure 28**), square the splitter to the table (**Figure 30**), and retighten the set screws.



**Figure 30.** Squaring splitter.

20. Place the table insert into the table opening, and using a straightedge as a guide, adjust the table insert set screws (**Figure 31**) until the table insert is flush with the table top.
21. Install the cabinet cover by lining up the hinges and tapping the hinge pins down into the hinges with a hammer.

**Note:** Paint can sometimes get into the hinge pin holes during manufacturing. If you have difficulty installing the hinge pins, use a round file or other similar tool to remove this paint for easier installation.



**Figure 31.** Adjusting table insert flush with table top.

22. Install the fence and rails as instructed in the owner's manual included with your fence. (Refer to **Pages 15 and 16** to clarify which fence parts are needed for your machine.)

**Note:** After installing the fence, you **MUST** make sure the fence is correctly adjusted parallel with the blade before making any cuts. A fence that is not parallel with the blade invites workpiece binding, which may lead to kickback and injury.



# Test Run

Before you test run the machine, do these steps:

1. Read all the warnings and directions regarding the operation and controls of this machine.
2. Make sure the saw is stable.
3. Make sure the blade is mounted correctly and that the arbor nut is tight.
4. Make sure the fence is parallel to the blade.
5. Make sure the guard assembly is installed, aligned with the blade, and functional.
6. Make sure the saw blade does not touch the table insert when it is adjusted to the maximum tilt angle and height.

To test run the table saw, do these steps:

1. Connect the table saw to the power source.
2. Face the table saw and stand to the left of the blade path.
3. Turn the table saw **ON**.
  - The table saw should run smoothly with little or no vibration; once it does, the machine is ready for regular operations.
  - Immediately turn the table saw **OFF** if you suspect any problems, and refer to **Page 48** to trouble-shoot/fix any problems before starting the table saw again. (If the source of an unusual noise or vibration is not readily apparent, contact our technical support for help.)

## ! WARNING



Projectiles thrown from the machine could cause serious eye injury. Wear safety glasses during assembly and operation.

## ! WARNING



Loose hair and clothing could get caught in machinery and cause serious personal injury. Keep loose clothing rolled up and long hair tied up and away from machinery.




# OPERATIONS

## General


Table saws will perform many types of operations that are beyond the scope of this manual. Many of these 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 experience difficulty performing an 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 table saw 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. DO NOT risk your safety by not reading!**

## Blade Height

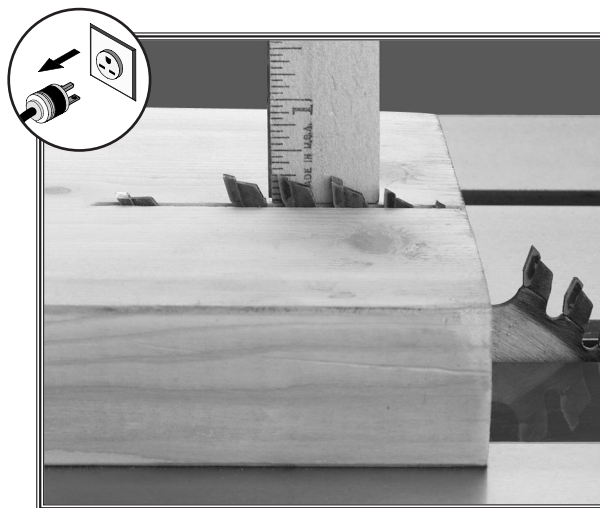
For optimum cutting on through-cuts, raise the blade height so it protrudes above the workpiece approximately  $\frac{1}{4}$ " as shown in **Figure 32**. Ideally, you want 5-7 teeth in the workpiece during all operations.

## Feed Rate

The rate at which you push the workpiece into the moving blade is extremely important for making safe and quality cuts. Using improper feed rates for long periods of time will also decrease the life span of your saw and blades.

To determine the appropriate feed rate, take into consideration the size of your motor, the thickness of your workpiece, and the type and sharpness of your blade. Most of all, listen to the motor and use common sense. If the motor sounds like it is struggling during a cut, it probably is. Reduce the feed rate immediately to reduce the risk of kickback.

Generally, more teeth in a cut causes more friction. Smaller teeth take less of a bite out of the wood than larger teeth; thus, they need a slower feed. Too much heat can cause your stock to burn, your blades to wear out prematurely, and may result in kickback.



**Figure 32.** Top of blade protruding approximately  $\frac{1}{4}$ " from workpiece.



# Blade Selection

With all the various kinds of blades available, it would be beyond the scope of this manual to name every type of blade and tooth design. However, some basics are important to know.

## Blade Material

There are two major materials used in circular saw blades—**Carbide** and **Steel**.

Most woodworkers these days prefer **carbide-tipped blades** because they can last much longer than steel blades before they need to be resharpened. Carbide-tipped blades are also a lot more expensive than steel blades and require expensive honing equipment to be sharpened.

**Steel** blades can be sharper than carbide-tipped blades and create less friction during a cut. Since they wear out so quickly, they are often only used if heat will be a foreseeable problem when cutting thick stock. Steel blades are easy to sharpen and are not as expensive as their carbide-tipped counterparts.

## Blade Types

- Rip blades (**Figure 33**) typically have between 30-40 teeth and provide fast feed rates when making long cuts along the grain. Rip blades have large teeth for excellent chip clearance and minimal binding. The main drawback for rip blades are the rough cuts left in the stock.
- Crosscutting blades (**Figure 34**) are designed for quick, smooth action when making cuts across the grain. Drawbacks of this type of blade are buildup of heat, slower feed rates and premature wear of the blade because the greater number of teeth creates more friction.
- Combination blades (**Figure 35**) perform both ripping and crosscutting duties well. The blades carry enough teeth to perform the smooth cutting of a crosscutting blade and the large gullets of a rip blade to clear sawdust quickly. Drawbacks of this type of blade are that they do not perform either function as well as a dedicated rip or crosscut blade.

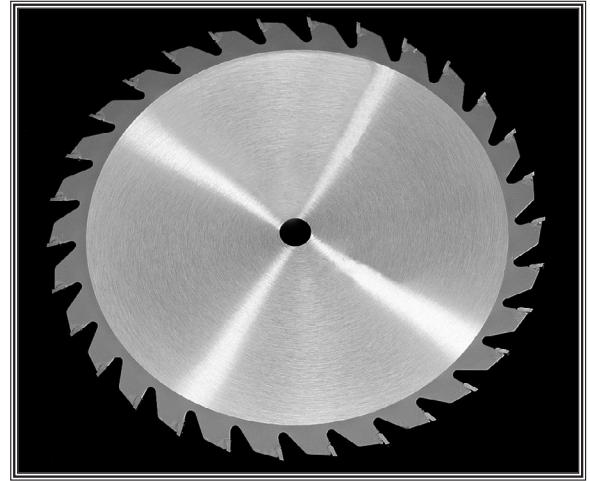


Figure 33. Rip blade.

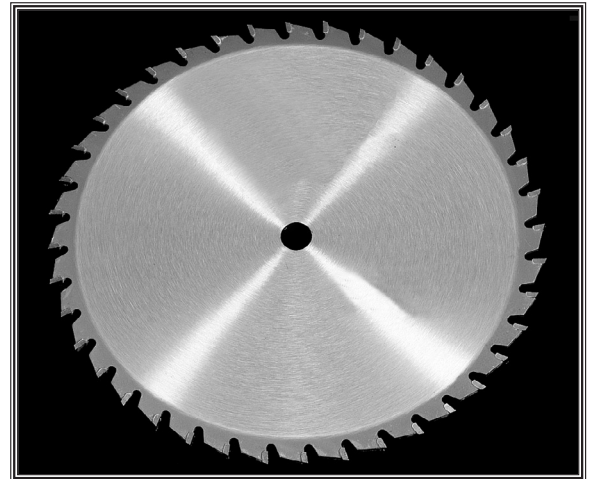


Figure 34. Crosscutting blade.

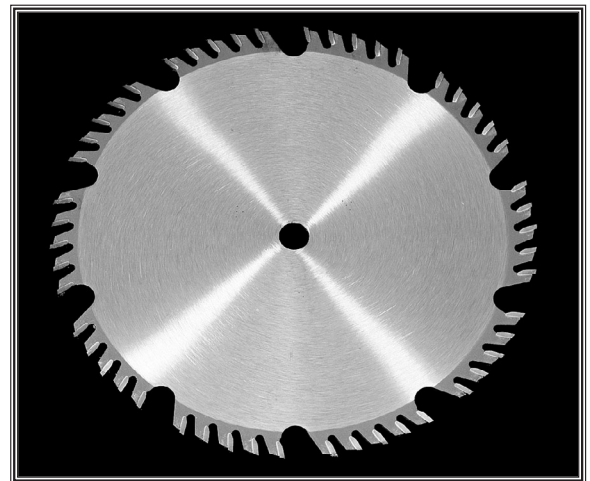


Figure 35. Combination blade.



- Plywood blades (**Figure 36**) have a large number of teeth, have a thin kerf and create exceptionally smooth cuts. As the name implies, these types of blades are excellent for fine plywood and also for cutting bevels, rabbets or compound miters. The drawback to this type of blade is the great amount of heat produced from the many teeth. These blades should not be used for heavy ripping or cutting thick stock.
- Dado blades come in three different types: stack dadoes, wobble dadoes, and V-dadoes. Dado blades allow the operator to change kerf sizes and to make quick and easy non-through cuts. Dado blades are primarily designed for making dado and rabbet cuts. The drawback to these type of blades are their high cost. **Figure 37** shows a stack dado blade.

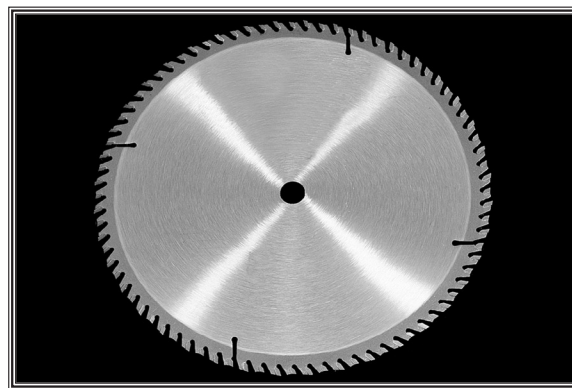


Figure 36. Plywood blade.

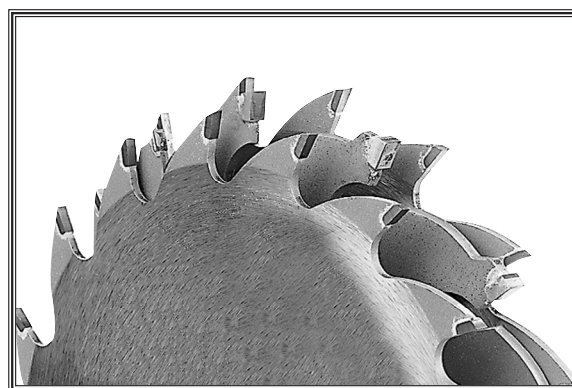


Figure 37. Stack dado blade.

## ⚠ CAUTION

Do not use dado blades for through cuts. They are not designed for through cuts and may cause minor to moderate personal injury when misused.

**Tooth Configuration** is another important aspect of blade design. There are four main types: **flat-top grind** for fast heavy-duty ripping; **alternate-top bevel** for reduced-heat, tear-out free cuts, and ripping/cutting; **alternate-top bevel and raker** for solid and plywood, good all-around, but not for fine joinery; and **triple-chip grind** for cutting hardwoods as well as plastics, particle board and aluminum. **Figure 38** shows these configurations, along with their respective kerf profiles.

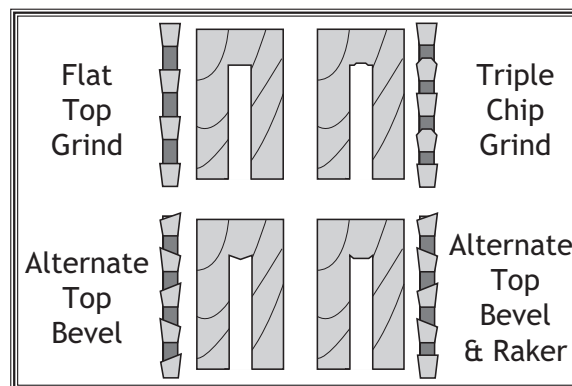
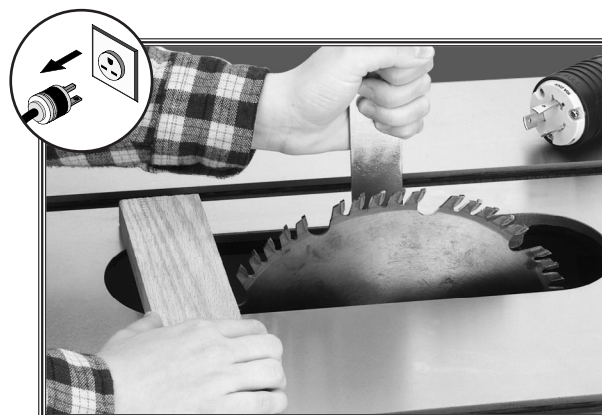


Figure 38. Tooth configurations.

## Changing Blades

To change blades, do these steps:

1. DISCONNECT POWER FROM THE TABLE SAW!
2. Block the blade with a piece of scrap wood, as shown in **Figure 39**, and remove the arbor nut and flange.
3. Remove the existing blade.
4. Install the new blade, flange, and arbor nut, making sure that the teeth of the blade point toward the front of the saw.
5. Block the blade with the scrap piece of wood and tighten the arbor nut with the arbor wrench.



**Figure 39.** Using a scrap piece of wood to aid in tightening/loosening blade. *Guard removed for clarity.*



# Through vs. Non-Through Cuts

Understand the safety precautions for each type of cut to reduce the risk of injury.

The risk of kickback exists with both through and non-through cuts. Kickback is an event in which the workpiece is propelled back towards the operator at a high rate of speed. The risk of kickback is higher with non-through cuts because the splitter and blade guard must be removed. Always remember to re-install the blade guard and splitter after performing a non-through cut.

## Through Cuts

A through cut is a sawing operation in which the workpiece is completely sawn through. Rip cuts, cross cuts, miter cuts, and angled cuts are all through cutting operations.

Safety precautions and instructions for through cuts are located on the following pages:

Rip Cuts: Page 27

Cross Cuts: Page 28

Miter Cuts: Page 28

Blade Tilt/Bevel Cuts: Page 27

## Non-Through Cuts

A non-through cut is a sawing operation where the blade does not protrude above the top face of the wood stock. Non-through cuts require the removal of the blade guard and splitter. Dado cuts, rabbet cuts, and resawing are the only non-through cuts that can be performed with this table saw. Always replace the blade guard after non-through cuts!

Safety precautions and instructions for through cuts are located on the following pages:

Dado Cuts: Page 29

Rabbet Cuts: Page 31

Resawing: Page 33

### WARNING

DO NOT make a through-cut with a dado blade. Dado blades are not designed for through cuts. Failure to follow this warning could result in serious personal injury.

### WARNING

The blade guard/splitter is a critical safety device that greatly reduces operator risk of injury. The blade guard **MUST** be re-installed after making non-through cuts.



## Rip Cuts

Rip cuts or "Ripping" means cutting with the grain of the workpiece. In other materials such as MDF or plywood, ripping simply means cutting lengthwise.

To make a rip cut, do these steps:

1. Review **Preventing Kickback** on **Page 11** and take the necessary precautions to prevent kickback.
2. Joint one long edge of the workpiece on a jointer.
3. **DISCONNECT THE SAW FROM POWER!**
4. Use the scale to set the fence to the desired width of cut.
5. Adjust the blade height so the teeth protrude approximately  $\frac{1}{4}$ " above the workpiece.
6. Set up safety devices such as featherboards or other anti-kickback devices.
7. Rotate the blade to make sure it does not come into contact with any of the safety devices.
8. Plug the saw into the power source, turn it **ON**, and allow it to reach full speed.
9. The jointed edge of the workpiece must slide against the fence during the cutting operation.
10. Using a push stick, feed the workpiece through the saw blade, as shown in **Figure 40**, until the workpiece is completely past the saw blade.

### WARNING

Serious injury can be caused by kickback. Kickback is a high-speed expulsion of stock from the tablesaw toward an operator. The operator or bystanders may be struck by flying stock, or the operator's hands can be pulled into the blade during the kickback.



Figure 40. Typical rip cut.



Figure 41. Blade tilted to 45° (guard removed for photo clarity).

## Blade Tilt/Bevel Cuts

The blade can tilt anywhere between 0° and 45°, and the blade guard tilts with the blade. **Figure 41** shows an example of the blade when tilted to 45°, and **Figure 42** shows an example of a typical 45° rip cut.

When using the tilting mechanism:

- **Never** tilt the blade while it is moving.
- Slow your feed rate down.
- Make sure the blade does not touch the table insert before starting the saw.



Figure 42. Typical 45° rip cut.



## Cross Cuts

Cross Cuts or "Crosscutting" means cutting across the grain of the workpiece. In MDF or particleboard, crosscutting is cutting across the width of the workpiece.

To crosscut using the miter gauge, do these steps:

1. DISCONNECT THE SAW FROM POWER!
2. Remove the rip fence and position the miter gauge, adjusted to 90°, in a miter slot.
3. Adjust the blade height so the teeth protrude approximately 1/4" above the workpiece.
4. Slide the miter gauge near the blade and adjust the workpiece so the blade will cut on the waste side of the line.
5. Plug in the tablesaw, turn it **ON**, and allow it to reach full speed.
6. Hold the workpiece firmly against the face of the miter gauge and ease it into the blade as shown in Figure 43.

### WARNING

Serious injury can be caused by kickback. Kickback is a high-speed expulsion of stock from the tablesaw toward an operator. The operator or bystanders may be struck by flying stock, or the operator's hands can be pulled into the blade during the kickback.

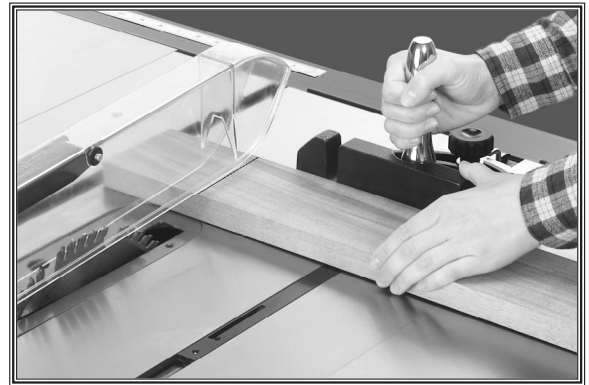


Figure 43. Typical cross cut.

## Miter Cuts

A miter is an angled crosscut. Miters are usually cut in the same manner as 90° crosscuts, using the miter gauge and a predetermined mark on the workpiece.

To cut a miter, do these steps:

1. Determine the angle of your cut and mark it across your workpiece.  
  
**Tip:** A correctly calibrated miter gauge makes marking angles easy. Place the face of the miter gauge against the edge of the workpiece, so the bar goes across the face of the workpiece, and use the bar as a guide (see Figure 44) to pencil in your cut.
2. With miter gauge in the table slot, hold the workpiece against the miter gauge body and align the mark to the blade.
3. Make the cut in the same manner as described in the **Cross Cuts** instructions.



Figure 44. Using the miter gauge to mark the angle of a miter cut.



## Dado Cuts

Commonly used in furniture joinery, a dado is a straight channel cut in the face of the workpiece. Dadoes can be cut using either a dedicated dado blade or a standard saw blade.

The table saw motor may be pushed to its limits when making a dado cut. If the motor starts to bog down, slow down your feed rate.

To use a stacked or wobble dado blade, do these steps:

1. DISCONNECT THE SAW FROM POWER!
2. Remove the table insert, the blade guard, and the saw blade.
3. Attach and adjust the dado blade system according to the dado blade manufacturer's instructions, then install the table insert for dado blades.
4. Raise the dado blade up to the desired depth of cut (depth of dado channel desired). When cutting deep dadoes, take more than one pass to reduce the risk of kickback.
5. Adjust the fence as necessary to align the blade with the desired location of the dado.
6. Reconnect the power and cut the dado.

**Note:** When dadoing across a workpiece, use the miter gauge and carefully line up the desired cut with the dado blade. DO NOT use the fence in combination with the miter gauge.

### WARNING

The danger of kickback increases relative to the depth and width of a cut. Reduce the risk of kickback by making multiple passes to achieve the desired depth of cut. Failure to follow these warnings could result in serious personal injury.

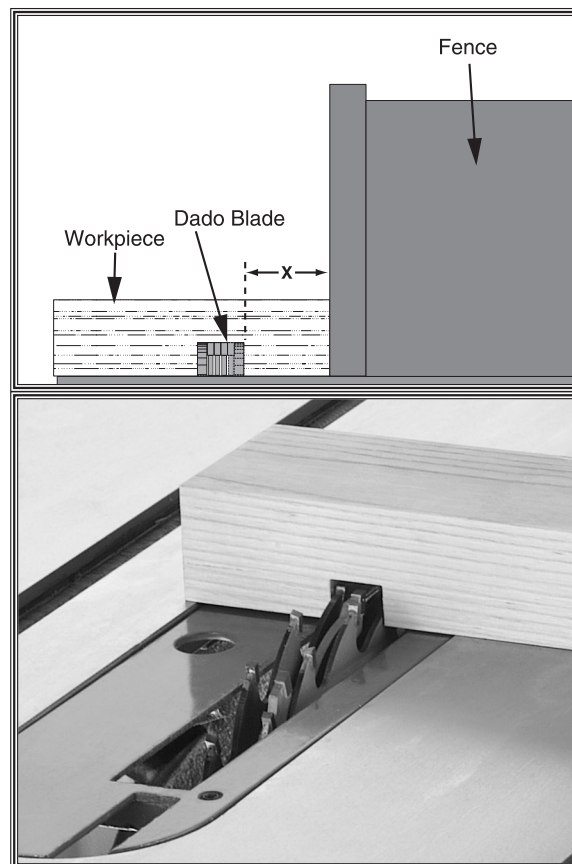


Figure 45. Dado cut.

### WARNING

DO NOT make a through-cut with a dado blade. Dado blades are not designed for through cuts. Failure to follow this warning could result in serious personal injury.

### WARNING

Dado operations require proper procedures to avoid serious injury. Extra care must be taken to prevent kickback when using dado blades. Any movement of the workpiece away from the fence will cause kickback. Be certain that stock is flat and straight. Failure to follow these warnings could result in serious personal injury.



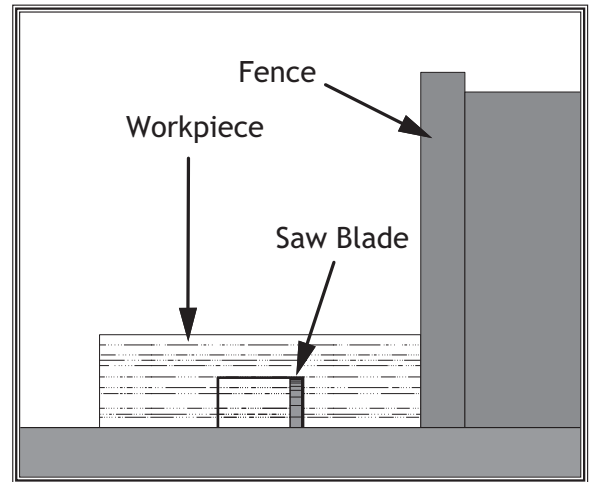
To cut dados with a standard blade, do these steps:

**Note:** Reduce motor overloading and blade wear by using a ripping blade. Ripping blades are designed to clear the sawdust quickly. Refer to **Page 24** for more details.

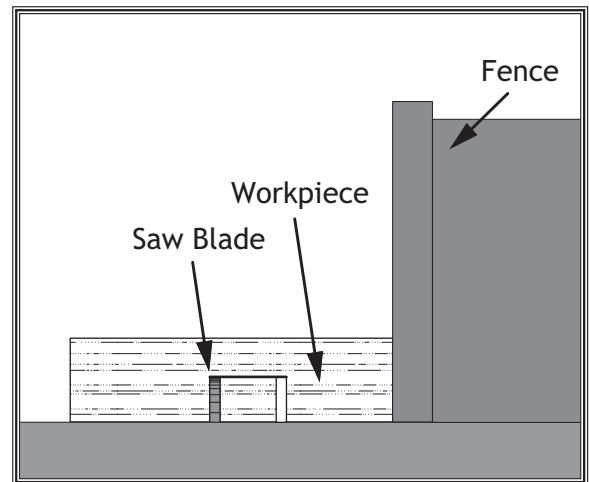
1. DISCONNECT THE SAW FROM POWER!
2. Mark the width of the dado cut on the workpiece. Include marks on the edge of the workpiece so the cut path can be aligned when the workpiece is lying on the table.
3. Raise the blade up to the desired depth of cut (depth of dado channel desired). When cutting deep dados, take more than one pass to reduce the risk of kickback.
4. If dadoing across the workpiece, use the miter gauge to support the workpiece, and align the blade to cut one of the dado sides. DO NOT use the fence in combination with the miter gauge.
5. If dadoing the length of a workpiece, align the blade to cut one of the dado sides as shown in **Figure 46**.
6. Reconnect the saw to the power source and turn the saw **ON**. Allow the blade to reach full speed.
7. Perform the cutting operation.
8. Re-adjust the fence so the blade is aligned with the other edge of the intended dado channel (**Figure 47**).
9. Continue making cuts toward the center of the dado until the dado is complete.

**Note:** Be sure to keep the cuts within your marks; otherwise, the dado will be too big.

9. Continue making cuts toward the center of the dado until the dado is complete.



**Figure 46.** First cut when making a dado with a standard ripping blade.



**Figure 47.** Second cut when making a dado with a standard ripping blade.



## Rabbet Cuts

Commonly used in furniture joinery, a rabbet is an L-shaped groove cut in the edge of the workpiece. Rabbets can be cut with either a dado blade or a standard saw blade.

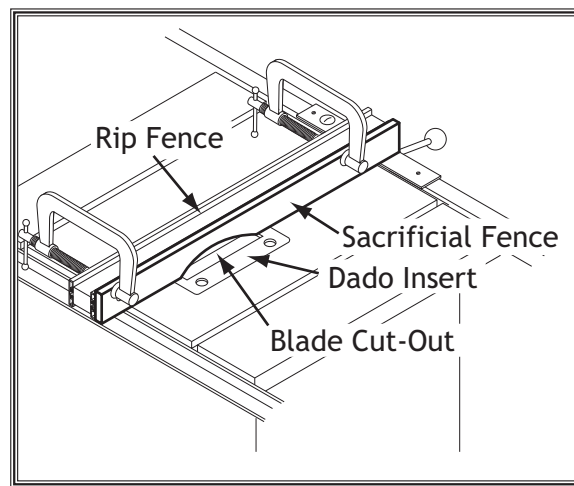
Rabbet cutting on the edge of the workpiece requires a sacrificial fence attachment (**Figure 48**). Make the sacrificial fence the same length as the fence and  $\frac{3}{4}$ " thick. Attach it to the fence with screws or clamps, making sure they are all secure and tight. With the saw turned **ON**, raise the blade into the sacrificial fence to the height needed.

To cut rabbets with the dado blade, do these steps:

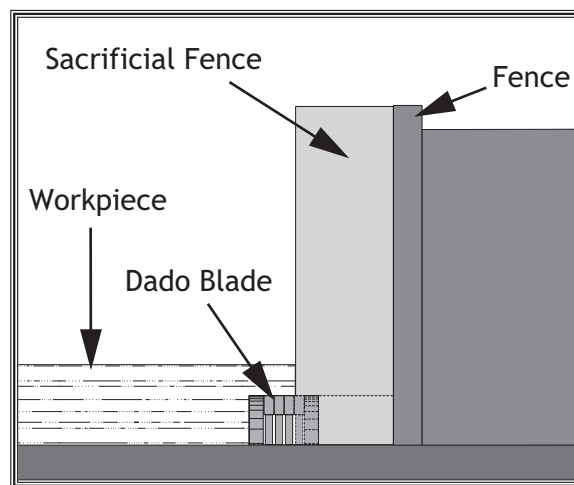
1. DISCONNECT THE SAW FROM POWER!
2. Adjust the dado blade to the height needed for the rabbeting operation. When cutting deep rabbets, take more than one pass to reduce the risk of kickback.
3. Adjust the fence and align the workpiece to perform the cutting operation as shown in **Figure 49**.
4. Reconnect the saw to the power source and turn the saw **ON**.
5. When the blade has reached full speed, perform a test cut with a scrap piece of wood.
6. If the cut is satisfactory, repeat the cut with the final workpiece.

### WARNING

Serious injury can be caused by kickback. Kickback is a high-speed expulsion of stock from the tablesaw toward an operator. The operator or bystanders may be struck by flying stock, or the operator's hands can be pulled into the blade during the kickback.



**Figure 48.** Sacrificial fence setup.



**Figure 49.** Rabbet cutting with a dado blade.



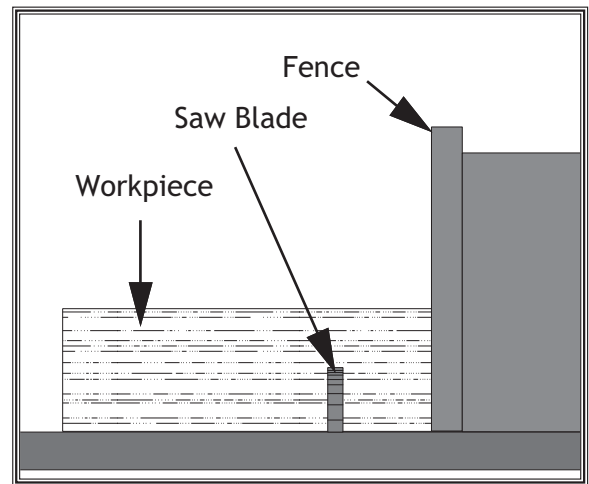
Cutting rabbets with a standard saw blade DOES NOT require the use of a sacrificial fence. Reduce motor overloading and blade wear by using a ripping blade. Ripping blades are designed to clear the sawdust quickly.

To cut rabbets with the standard blade, do these steps:

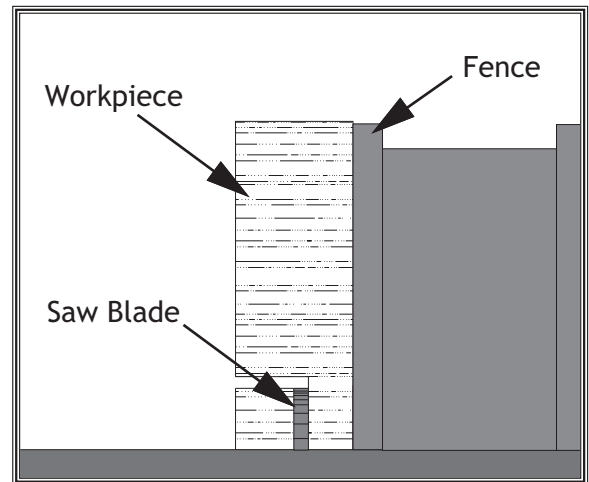
1. DISCONNECT THE SAW FROM POWER!
2. Clearly mark the width of the rabbet cut on the workpiece.

**Note:** Include marks on the edge of the workpiece to clearly identify the intended cut while it is laying flat on the saw table.

3. Raise the blade up to the desired depth of cut (depth of rabbet channel desired). When cutting deep rabbets, take more than one pass to reduce the risk of kickback.
4. Adjust the fence so the blade is aligned with the inside of your rabbet channel as shown in **Figure 50**.
5. Stand the workpiece on edge as shown in **Figure 51**, and adjust the saw blade height to intersect with the first cut.
6. Perform the second cut to complete the rabbet.



**Figure 50.** First cut when rabbet cutting with a standard rip blade.



**Figure 51.** Second cut when rabbet cutting with a standard rip blade.



# Resawing

Resawing is the process of cutting a thick piece of stock into one or more thinner pieces. Bandsaws are ideal for resawing and the process is fairly easy and safe. A table saw is not intended for resawing and the process is difficult and extremely dangerous. Resawing on the table saw often binds the blade, causing kickback. The risk of kickback increases relative to the depth of a cut. Kickback is more dangerous when resawing on a table saw because the anti-kickback devices and blade guard must be removed, leaving no protection between your hands and the saw blade. Kickback can pull the operator's hands into the blade, or the operator or bystanders may be hit by flying stock. DO NOT resaw on a table saw without using a resaw barrier. DO NOT resaw on a table saw without wearing a full face shield.

The following instructions describe how to build a resaw barrier, add an auxiliary fence to your standard fence, and safely perform resawing operations.

**Note:** *This table saw can only resaw wood that is less than 6" tall.*

## Resaw Barrier

The resaw barrier shown in **Figure 52** holds the workpiece vertical, keeps the workpiece aligned with the fence, and keeps your hands away from the blade.

### Components Needed for the Resaw Barrier:

Hardwood or Plywood $\frac{3}{4}$ " x $5\frac{1}{2}$ " x 27"	1
Hardwood or Plywood $\frac{3}{4}$ " x 3" x 27"	1
Wood Screws 2"	8
Wood Glue	As Needed

### Tools Needed for the Resaw Barrier:

Table Saw	1
Jointer and Planer	Recommended
Clamps	2 Minimum
Drill and Drill Bits	1

To build the resaw barrier, do these steps:

1. Cut two boards to  $\frac{3}{4}$ " x  $5\frac{1}{2}$ " x 27" and  $\frac{3}{4}$ " x 3" x 27". If you are using hardwood, cut the boards over-size, then joint and plane the boards to the correct size to make sure the boards are square and flat.

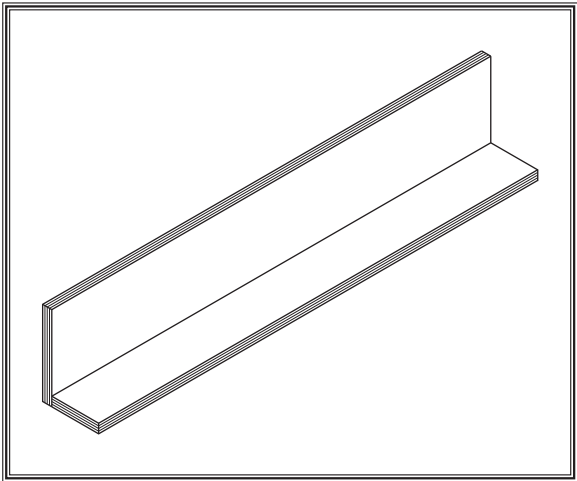
**Note:** *Only use furniture grade plywood or kiln dried hardwood to prevent warping.*

## ! WARNING

Resawing operations require proper procedures to avoid serious injury. Extra care must be taken to prevent kickback when resawing. Any tilting or movement of the workpiece away from the fence will cause kickback. Be certain that stock is flat and straight. Failure to follow these warnings could result in serious personal injury.

## ! WARNING

Resawing on a table saw increases the chances of kickback. Serious injury can be caused by kickback. Kickback is a high-speed expulsion of stock from the tablesaw toward an operator. The operator or bystanders may be struck by flying stock, or the operator's hands can be pulled into the blade during the kickback.



**Figure 52.** Resaw barrier.



2. Pre-drill and countersink 8 holes approximately  $\frac{3}{8}$ " from the bottom of the  $5\frac{1}{2}$ " tall board.
3. Glue the end of the 3" board, then clamp the boards at a 90° angle with the larger board in the vertical position as shown in **Figure 53**.
4. Secure the joint with the wood screws.

## Auxiliary Fence

The auxiliary fence is necessary if you are resawing wood that is more than 3" tall. It should be no less than  $\frac{1}{2}$ " shorter than the board to be resawn.

### Components Needed for the Auxiliary Fence:

Hardwood or Plywood $\frac{3}{4}$ " x (Height) x 27" .....	1
Flat Head Screws $\frac{1}{4}$ -20" x 1" .....	8
Hex Nuts $\frac{1}{4}$ -20" .....	8

### Tools Needed for the Resaw Barrier:

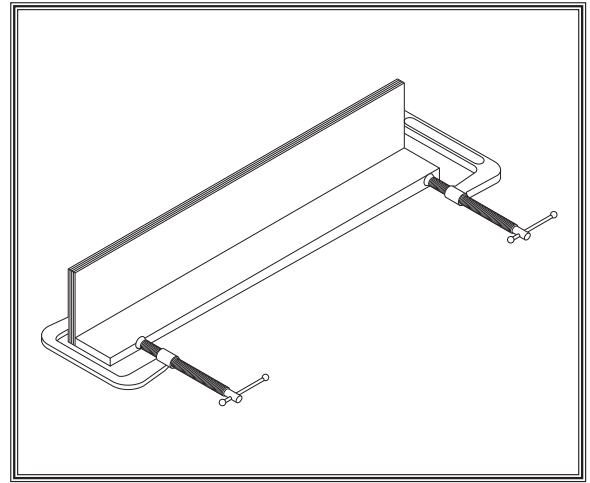
Table Saw .....	1
Jointer and Planer .....	Recommended
Clamps .....	2 Minimum
Drill and Drill Bits .....	1

To build the auxiliary fence, do these steps:

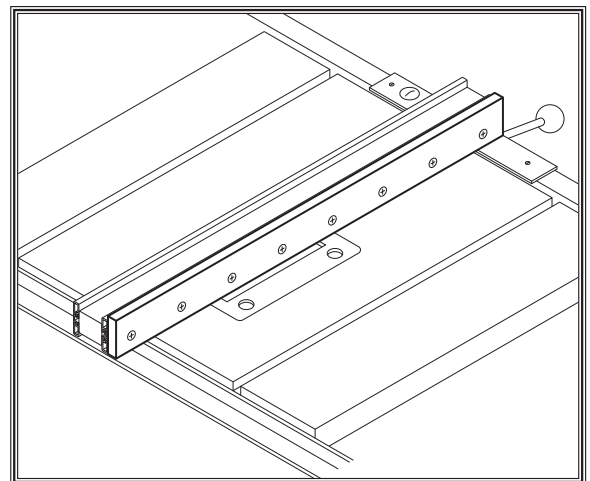
1. Cut a  $\frac{3}{4}$ " thick board 27" long, then cut it no less than  $\frac{1}{2}$ " shorter than the board to be resawn. If you are using hardwood, cut the board oversize, then joint and plane the board to the correct size to make sure the board is square and flat.

**Note:** Only use furniture grade plywood or kiln dried hardwood to prevent warping.

2. Pre-drill and countersink 8 holes  $1\frac{1}{4}$ " from the bottom of the board.
3. Pull an end cap off of the standard fence, then slide the hex nuts into the T-slot and replace the end cap.
4. Thread the flat head screws through the auxiliary fence and into the hex nuts in the standard fence, and tighten securely as shown in **Figure 54**.



**Figure 53.** Clamping the resawing barrier.



**Figure 54.** Auxiliary fence.



# Resawing Operations

Resawing pushes a table saw to its limits. If the motor bogs down when resawing, slow down your feed rate. Also, use a ripping blade when resawing to reduce motor overloading and blade wear. Ripping blades are designed to clear the sawdust quickly.

## Components Needed for Resawing:

Zero Clearance Insert .....	1
Ripping Blade 10" .....	1
Clamps .....	2
Shop Made Auxiliary Fence .....	1
Shop Made Resaw Barrier .....	1

To perform resawing operations, do these steps:

1. DISCONNECT THE SAW FROM POWER!
2. Remove the table insert and the blade guard/splitter, install a ripping blade and a zero clearance table insert, and lower the blade below the table surface.
3. Attach the auxiliary fence to the standard fence and set it to the desired width. **Note:** Account for blade kerf, the rough cut made by the blade, and the inaccuracy of the fence scale when the auxiliary fence is installed when figuring out the correct width.
4. Place the workpiece against the fence, slide the resaw barrier against the workpiece, and clamp the resaw barrier to the table top (see **Figure 55**).
5. Slide the workpiece over the blade to make sure it moves smoothly.
6. Raise the blade approximately an inch, or close to half the height of the workpiece, whichever is less.
7. Plug in the table saw, turn it **ON**, and use a push stick to feed the workpiece through the blade using a slow, steady feed rate.
8. Flip the workpiece end for end, keeping the same side against the fence, and run the workpiece through the blade.
9. Turn **OFF** the table saw, then separate the parts of the workpiece and hand plane the remaining ridge.
10. When finished resawing, remove the resaw barrier and re-install the blade guard/splitter.

## ! WARNING

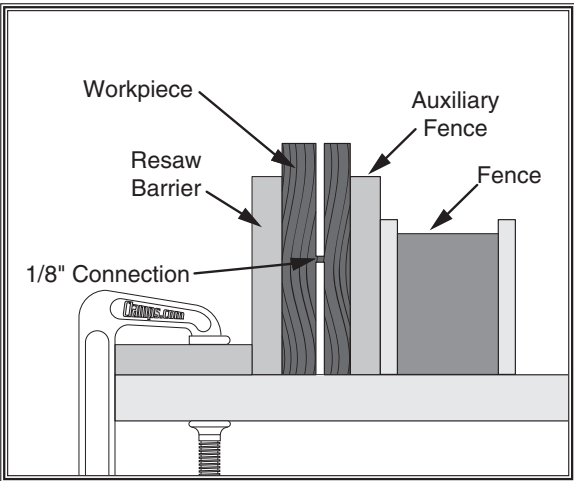
You may experience kickback during this procedure. Stand to the side of the blade and wear a full face shield to prevent injury when resawing.

## ! WARNING

Always use push sticks or push paddles to increase safety and control during operations which require that the blade guard and splitter be removed from the saw. **ALWAYS** replace the blade guard after resawing is complete.

## ! WARNING

The danger of kickback increases relative to the depth of a cut. Reduce the risk of kickback by making multiple passes to achieve the desired depth of cut. Failure to follow these warnings could result in serious personal injury.



**Figure 55.** Completed resaw cut.



# Aftermarket Safety Accessories

Besides making your table saw experience more enjoyable, aftermarket or shop-made safety accessories can greatly increase your personal safety, and allow you to make difficult cuts with your table saw that you would not otherwise be able to make.

Here are some basic aftermarket items you might want to consider:

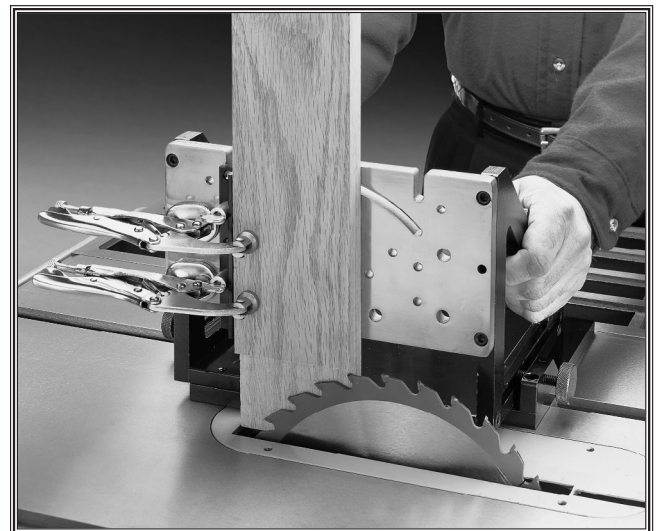
- A Roller Table (shown in **Figure 56**) or Roller Stand is designed to catch long boards during and after a cut. These accessories let the board easily glide off the saw table without causing a height difference. At the very least, a work table should be used for this same purpose. If a long piece of stock teeters over the edge of the table during a cut, a kickback may occur.
- Anti-Kickback Devices like the Boardbuddies® shown in **Figure 57** only allow the workpiece to move in one direction. If a kickback does occur, the wheels lock in place to stop or slow the movement of the workpiece.
- Hold-Down Jigs similar to the Right Angle Jig® shown in **Figure 58** allow the user to stabilize a cut beyond ordinary means. This is crucial for difficult cuts. Notice in **Figure 58** that the cut being performed would be extremely dangerous if the operator was using the rip fence. Other cuts, like vertical dados, would also be extremely difficult and dangerous without the use of similar devices.
- Push Sticks and Push Paddles help keep your hand away from the moving blade. They also act as a barrier between your hand and the workpiece in the event of a kickback. These devices come in many different sizes and shapes. Pick those that offer safety and stability without sacrificing comfort and grip.



**Figure 56.** Outfeed roller table.



**Figure 57.** Anti-kickback devices.



**Figure 58.** Hold-down jig.

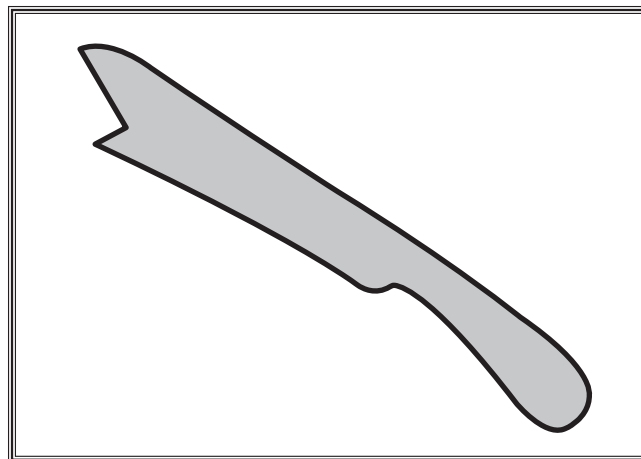


## Shop-Made Safety Accessories

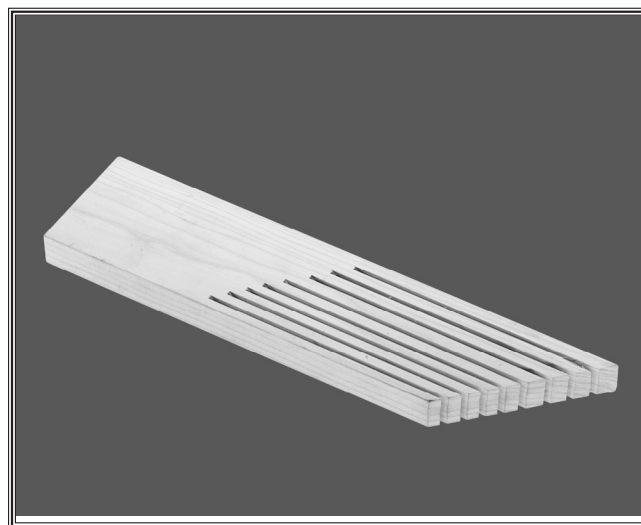
Shop-made safety accessories are another source of devices to use to increase your safety while operating the table saw. When care is taken with the setup and design, shop-made tools can be an invaluable resource for making the safest cuts possible.

Here are some of the basic items you may want to consider:

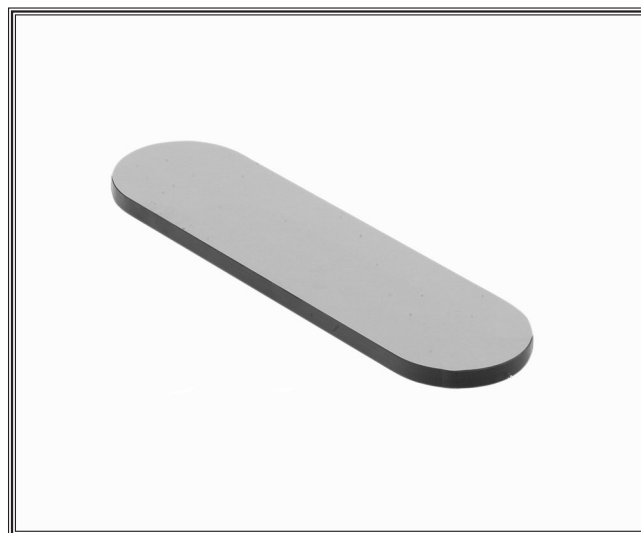
- Push Sticks made from the shop are very popular among table saw owners because they are inexpensive and easy to make. Particularly good are those that keep your hand a safe distance away from the blade, offer stable support and grip, and are comfortable in the hand. **Figure 59** shows an illustration of a simple push stick.
- Featherboards similar to the one in **Figure 60** make good anti-kickback devices. To use these, they must be clamped to the table or fence. The angled ends and flexibility of the fingers allow the workpiece to move in one direction and lock up if the workpiece moves backwards.
- Zero-Clearance Table Inserts can be purchased or made from wood and substituted for the factory inserts. The advantage in these devices is that there will only be as much space between the blade and the insert as the blade requires. Many woodworkers have a different insert for different heights and blades. Zero-clearance table inserts result in clean cuts with less tear-out and a reduced chance that a small piece of stock will be pulled down inside the saw or will be kicked back. **Figure 61** shows an example of a “blank” zero-clearance insert. When making a zero-clearance table insert, never hold the insert in place with your hands or try to lower the insert onto a moving blade. Hold or clamp the insert to the table with a sacrificial board, and use a smaller diameter blade to plunge the initial cut through the insert.



**Figure 59.** Illustration of a simple push stick.



**Figure 60.** Anti-kickback featherboard.



**Figure 61.** Zero-clearance table insert.



# MAINTENANCE

## V-Belts

The V-belts may stretch a little as the saw is used and may need to be tightened from time to time. Replacing the V-belts is not much harder than tightening them, but you must make sure you replace the V-belts with a matching set.

## Cleaning

Frequently blow-off dust with compressed air. Dust build-up around the motor and internal working parts will decrease the saw's life span.

Occasionally it will become necessary to clean the internal parts with more than compressed air. To do this, remove the table top and clean the internal parts with a citrus cleaner or mineral spirits and a stiff wire brush or steel wool. If any essential lubrication is removed during cleaning, relubricate those areas.

## Table & Base

Tables can be kept rust-free with regular applications of a quality metal protectant/lubricant.

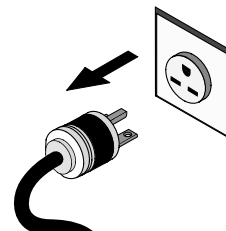
## Lubrication

Since all bearings are sealed and permanently lubricated, simply leave them alone until they need to be replaced. Do not lubricate them.

Lubricate the following areas every six to twelve months according to frequency of use:

- **Blade angling trunnions.** These should be lubricated with 6 or 7 drops of light machine oil.
- **Blade height trunnion.** This should also be lubricated with 6 or 7 drops of light machine oil.
- **The two worm gears** should be lubricated with either graphite or white lithium grease.

## ! WARNING



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

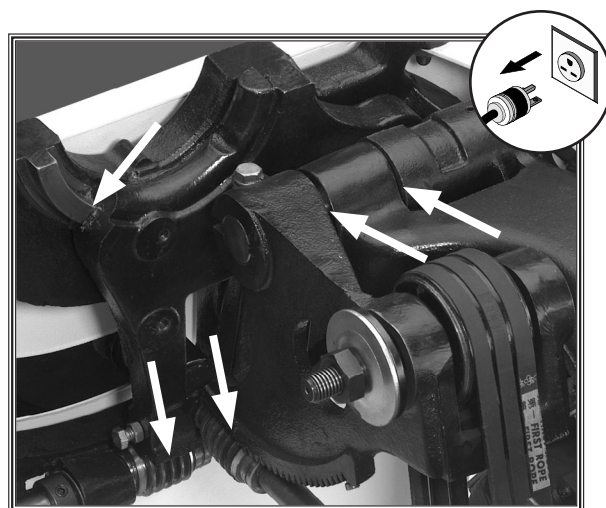


Figure 62. Lubrication points.



# SERVICE

## General

This section covers the most common service adjustments or procedures that may need to be made during the life of your machine.

If you require additional machine service not included in this section, please contact Woodstock International Technical Support at (360) 734-3482 or send e-mail to: [tech-support@shopfox.biz](mailto:tech-support@shopfox.biz).

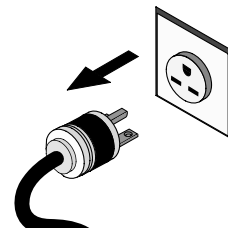
## Blade Tilt Stop Bolts

The table saw trunnion features 45° and 90° stop bolts on the geared trunnion that, when adjusted correctly, stop the blade exactly at 45° and 90° during blade adjustments.

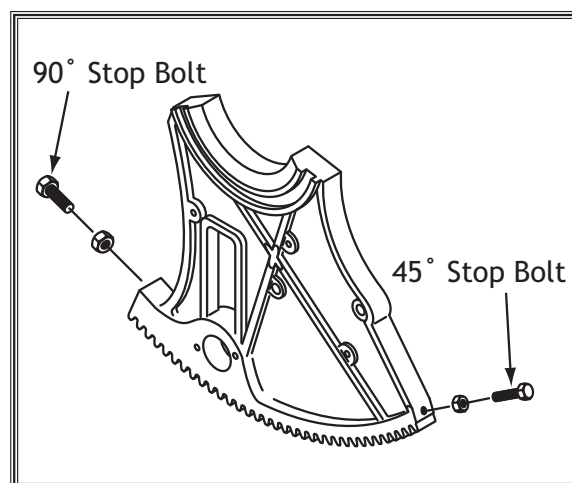
To set the stop bolts on the trunnion, do these steps:

1. DISCONNECT SAW FROM POWER!
2. Position the blade tilt to zero (see indicator on the front of the saw), and raise the blade several inches above the table.
3. Place a machinist's square flat on the table and slide it alongside the blade. The square should contact the blade evenly from bottom to top. Make sure that a blade tooth does not obstruct the movement of the square.
4. Adjust the handwheel until the square is flush with the blade. Loosen the tilt indicator arrow, set to zero, and retighten. Loosen and adjust the stop bolt on the left side of the front trunnion to allow a 90° stop point. Refer to **Figure 63** for details.
5. Turn the blade angle handwheel until the angle indicator points at the desired angle.
6. Tighten the handwheel locking knob.
7. Repeat **Steps 1-6** for setting the blade to 45° and adjust the 45° stop bolt on the right side of the front trunnion. Use the 45° side of a combo square or a bevel gauge set at 45°.

### WARNING



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



**Figure 63.** Blade tilt stop bolts.



## Blade Alignment

If the blade touches the table insert when you raise and lower it, then the table needs to be shifted where it mounts to the cabinet. If you do this and the blade still needs to be adjusted, the trunnion assembly can be adjusted inside the cabinet so the blade is repositioned.

**To adjust the trunnion assembly, do these steps:**

1. DISCONNECT SAW FROM POWER SOURCE!
2. Get another person to help you remove the table and wings.
3. The first option is to loosen the trunnion assembly mounting bolts shown in **Figure 64** and then shift the entire trunnion assembly in the appropriate direction. Tighten the trunnion assembly mounting bolts.
4. Place the table back on the cabinet and install the table mounting bolts without tightening completely. Check the blade position relative to the table insert. If further adjustments are needed, try to do so by shifting the table.

Finally, if the above adjustments do not resolve the blade alignment situation, you need to adjust the geared bearing housing shown in **Figure 65**.

**To adjust the geared bearing housing, do these steps:**

1. Get another person to help you remove the table and wings, and then loosen the blade adjustment bolt shown in **Figure 65**.
2. Slide the geared bearing housing in the appropriate direction, according to the blade position.
3. Place the blade on the arbor and finger tighten the arbor nut to make sure the blade does not touch any of the internal parts of the saw.
4. Remove the blade and tighten the blade adjustment bolt.
5. Replace the table, the wings, and the table insert. Tighten these securely. Install the blade on the saw and tighten the arbor nut.

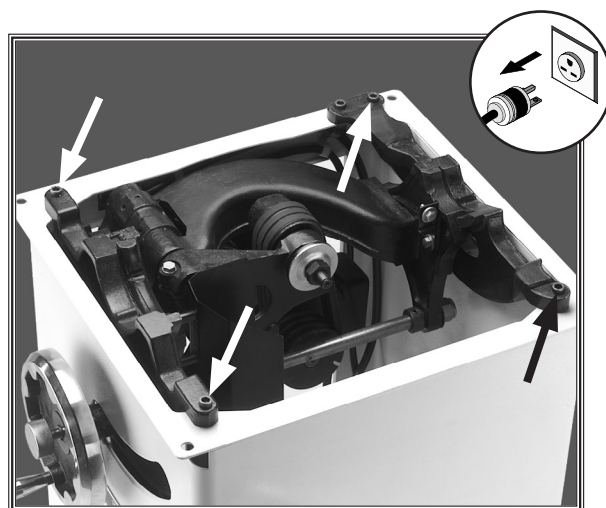
### **WARNING**



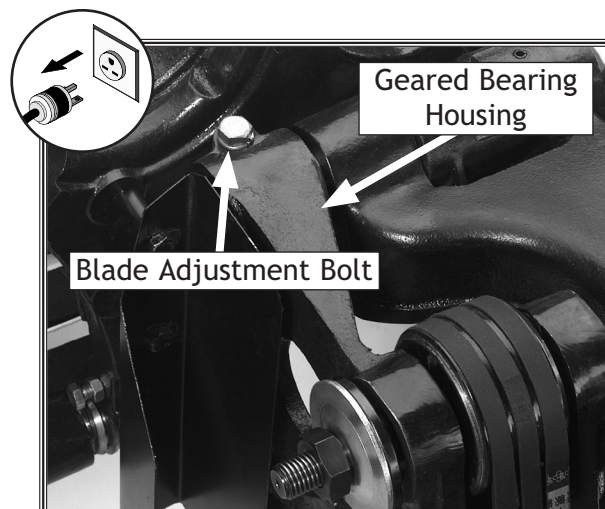
The table and wings are very heavy and may cause injury while lifting. Get help when lifting to reduce the risk of injury.

### **NOTICE**

If you move the blade position, make sure to align blade splitter and check the miter slot-to-blade alignment.



**Figure 64.** Trunnion assembly mounting bolts.



**Figure 65.** Lower wheel adjustment control.



6. Raise the blade and check its position in the table insert opening. If the blade position is not satisfactory, make sure you have correctly shifted the components discussed in this section. If you repeat these steps and still cannot get favorable results, call our Technical Support.

## Miter Slot Parallel to Blade

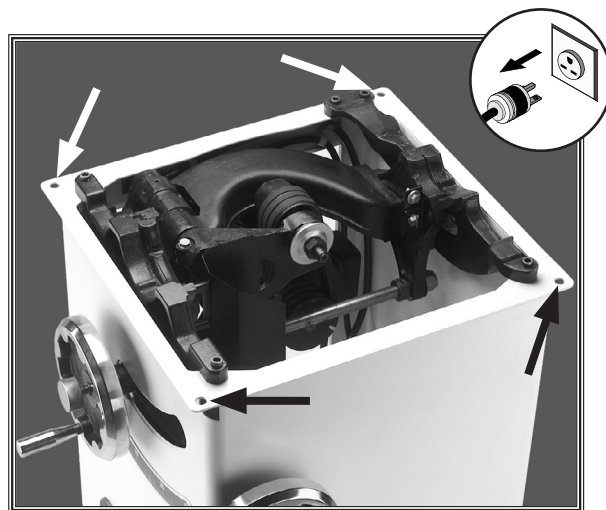
To cut accurately when using the miter gauge, the miter slot **MUST** be parallel to the blade.

To check and adjust the miter slot parallel to the blade, do these steps:

1. **DISCONNECT SAW FROM POWER SOURCE!**
2. Raise the blade to its full height and set the blade 90° to the table.
3. Use an adjustable square to measure the distance from the miter slot to a carbide tip on the blade as shown in **Figure 66**. Make sure that the face of the adjustable square is even along the miter slot.
4. With the end of the adjustable square just touching the tip, lock the square in place. Now, mark the carbide tip with a magic marker where you made this measurement.
5. Rotate that tip to the other end of the table insert.
6. Slide the adjustable square down to the other end of the table insert, and compare the distance from the marked blade tip to the end of the adjustable square.
7. If the blade tip does not touch the end of the adjustable square similar to the first measurement, then the table will need to be adjusted.
8. To adjust the table, loosen the four bolts at the table mounting locations shown in **Figure 67**.



**Figure 66.** Measuring blade to miter slot.



**Figure 67.** Table mounting locations.

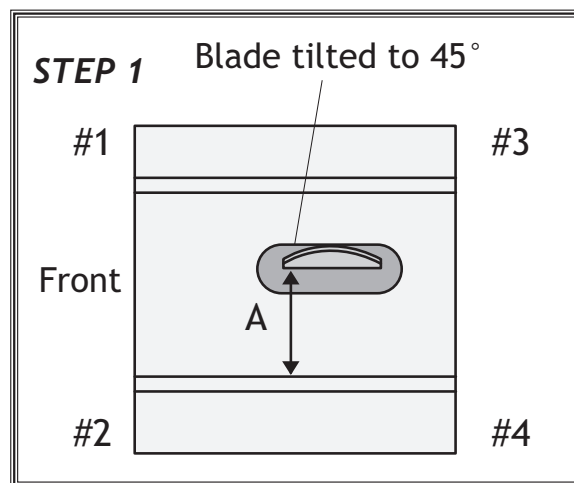


9. Slightly rotate the table in the appropriate direction. Recheck the measurements you did in **Steps 3 & 6**.
10. When you have adjusted the table so both measurements are the same, tilt the blade to 45° and measure the distance from the miter slot to the blade as done in **Steps 2-5**.
  - If these measurements are the same, tighten the table mounting bolts, then recheck to make sure the table did not move during tightening. No further adjustments are necessary.
  - If either of these measurements are different from the other, then the table needs to be shimmed with metal shim stock at the table mounting locations. Proceed to the next step.
11. First determine which measurement is longer. If measurement "A" (**Figure 68**) is shorter, then corners #1 and #2 need to be shimmed.
12. If measurement "B" (**Figure 69**) is shorter, then corners #3 and #4 need to be shimmed.
13. Place equal sized pieces of metal shim stock under each of the corners that need to be shimmed. Repeat this until the distance from the miter slot to the blade is equal at both the front and back.
14. Set the blade to 90° and make sure the miter slot is still parallel to the blade.
15. Tighten the table mounting bolts and recheck measurements. Adjust if necessary.

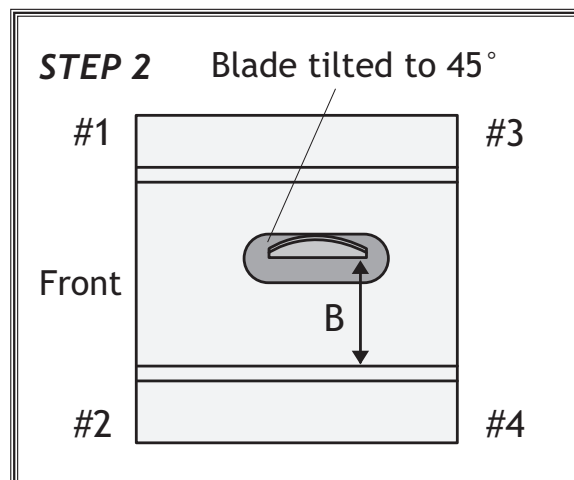
## Shimming Wings

To shim an extension wing, do these steps:

1. DISCONNECT SAW FROM POWER SOURCE!
2. Remove the extension wing from the table.
3. If the extension wing tilts up, place a few layers of tape above the wing mounting bolt holes as shown in **Figure 70**. If the extension wing tilts down, place the tape below the bolt holes.
4. Reinstall the extension wing on the table, trim any projecting tape, and check to see if the table is flat. Repeat as necessary until the extension wing creates one flat surface with the main table.



**Figure 68.** Measuring blade to miter slot at point A.



**Figure 69.** Measuring blade to miter slot at point B.



**Figure 70.** Shimming table with masking tape.



# Splitter Adjustment

To adjust the blade splitter square to the table, do these steps:

1. DISCONNECT SAW FROM POWER SOURCE!
2. Loosen the set screws shown in **Figure 71** to allow the blade splitter to rotate on the support shaft.
3. Use a try square to adjust the blade splitter 90° to the table as shown in **Figure 72**. Tighten the set screws to lock the splitter in place.

To check and align the splitter to the blade, do these steps

1. DISCONNECT SAW FROM POWER SOURCE!
2. Raise the blade to its maximum height. With a straightedge, check to make sure that the blade splitter is in-line with the blade, similar to **Figure 29** on **Page 21**. If it is, tighten the adjustment bolts on the splitter bracket. If it is not, you need to realign the splitter to the blade.
3. To align the splitter to the blade, loosen the two adjustment bolts shown in **Figure 73** and the two adjustment bolts on the bracket that attaches the front of the splitter shown in **Figure 71**.
4. Align the blade and splitter so they both evenly touch the straightedge. Tighten all the adjusting bolts to secure the splitter in place.

## ⚠ WARNING

The blade splitter **MUST** be installed and aligned with the blade before cutting, or the risk of kickback will be greatly increased and severe injury may occur. If you cannot get the blade splitter aligned with the blade, call our Technical Support for help.

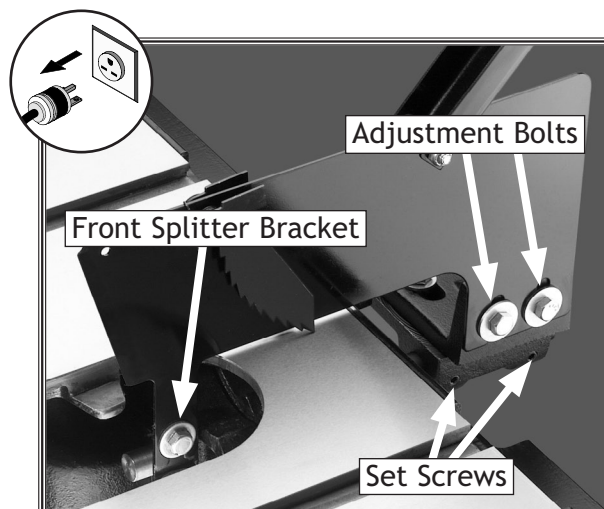


Figure 71. Splitter attachment locations.

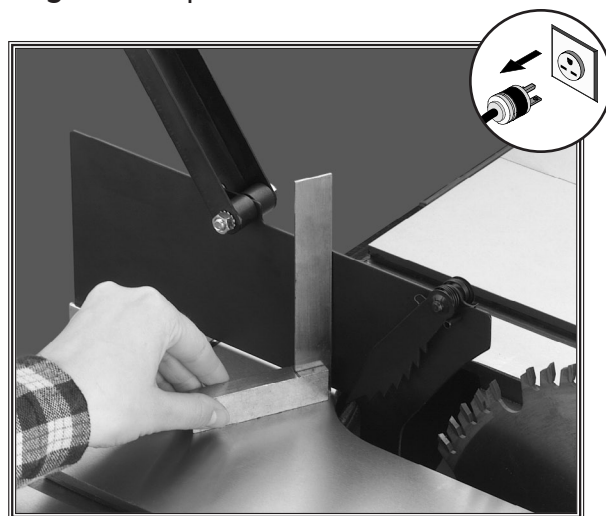


Figure 72. Squaring splitter to table.

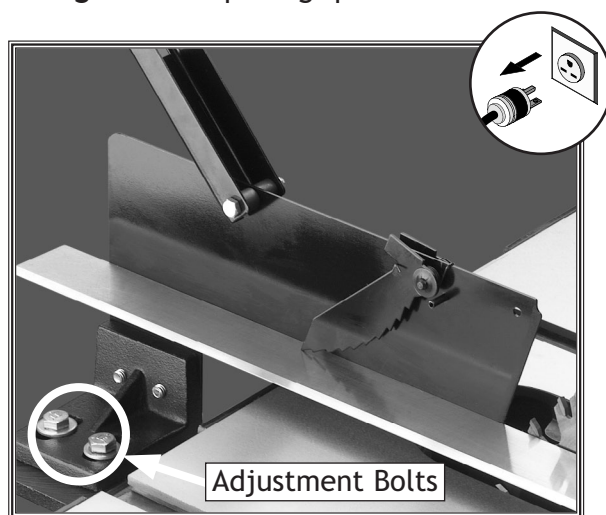


Figure 73. Aligning splitter to blade.



## Angle Pointer

The angle pointer allows you to set the angle to the correct position on the angle gauge after setting the 90° and 45° angles.

To set the angle pointer, do these steps:

1. Make sure that you have performed the 90° and 45° instructions in the **Blade Tilt Stop Bolts** section on **Page 39** before beginning.
2. Turn the blade to 90°.
3. Check the angle pointer. If it reads "0", then it is already adjusted correctly.
4. If it is not pointing to "0", then loosen the adjustment screw shown in **Figure 74**. Set the pointer to the "0" then tighten the adjustment screw.



Figure 74. Blade tilt pointer.

## Miter Gauge

The miter gauge (shown in **Figure 75**) allows you to support the workpiece while crosscutting. In order to be accurate, the miter gauge pointer needs to be adjusted before use.

To set the miter gauge pointer, do these steps:

1. Loosen the adjustment knob shown in **Figure 75**, so the miter gauge rotates back and forth.
2. Using a square, adjust the miter body so it is square to the miter bar.
3. Tighten the knob so the miter body is secure.
4. Loosen the setscrew on the miter slide next to the angle pointer, and adjust the angle pointer so it reads "0". Tighten the nut so the angle pointer is secure.
5. Check and adjust if necessary.



Figure 75. Miter gauge.

### NOTICE

If the miter bar fits too loose in the miter slot, it can be adjusted by tightening the set screws on the side of the miter slide. These set screws push the thin walls of the slide out slightly to create resistance while in the miter slot. Do not overtighten.



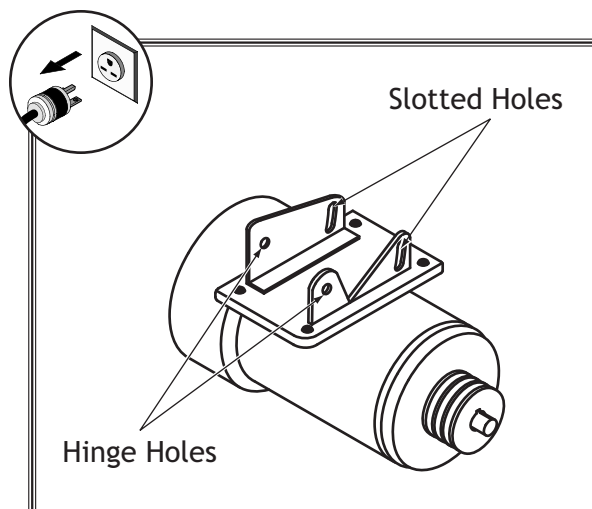
## Replacing V-Belts

The V-belts are tensioned by pivoting the motor up or down. The slotted holes in the motor mount bracket (**Figure 76**) allow the motor to pivot in the hinge holes.

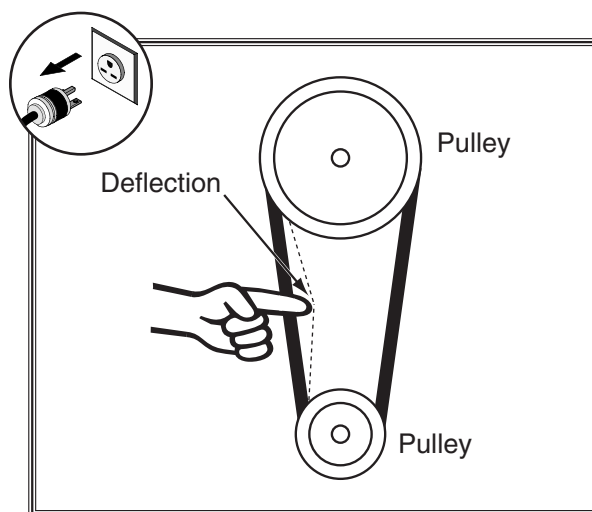
To replace the V-belts, do these steps:

1. DISCONNECT SAW FROM POWER SOURCE!
2. Loosen the motor mount bolts.
3. Pivot the motor up so the belts loosen, then remove them from the pulleys.
4. Install a matching set of new V-belts.
5. Pivot the motor down to tighten the belts, and hold downward pressure on the motor with one hand and tighten the motor mount bolts with the other hand.
6. Check the belt tension by pushing (with moderate pressure) one of the belts between the pulleys, as shown in **Figure 77**. The correct deflection range is between  $\frac{1}{4}$ " and  $\frac{1}{2}$ ".

**Note:** V-belts only need to be tight enough so they don't slip when the motor is at full load. Extremely tight V-belts will cause the motor and pulley bearings to wear faster.



**Figure 76.** Motor mount anatomy.



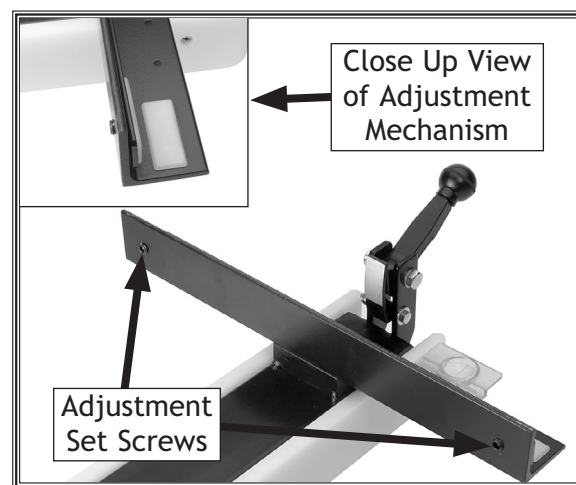
**Figure 77.** Checking V-belt deflection to ensure correct tension.

## Adjusting Fence

The adjustment set screws shown in **Figure 78** allow you to pivot the fence left or right to make it parallel with the blade. The fence must be parallel to the blade or slightly (no more than  $\frac{1}{32}$ " from front to back) angled away from the blade at the rear of the fence so the workpiece will not bind between the fence and blade during the cut.

If your workpiece binds as you make your cuts, the risk of serious personal injury from kickback increases dramatically. Signs that the workpiece is binding include burn marks on the workpiece and difficulty feeding the workpiece completely through the cut.

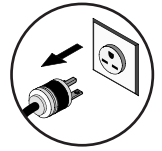
The basic procedure for adjusting the fence is to tighten one side and loosen the other side in equal increments. The side that is loosened is the side that the fence will move toward. For full instructions on adjusting the fence, refer to the Owner's Manual included with the fence.



**Figure 78.** Fence adjustment controls.



# W1677 Wiring Diagram



COLOR KEY	
BLACK	Bk
GREEN	Gn
RED	Rd
BLUE	Bl

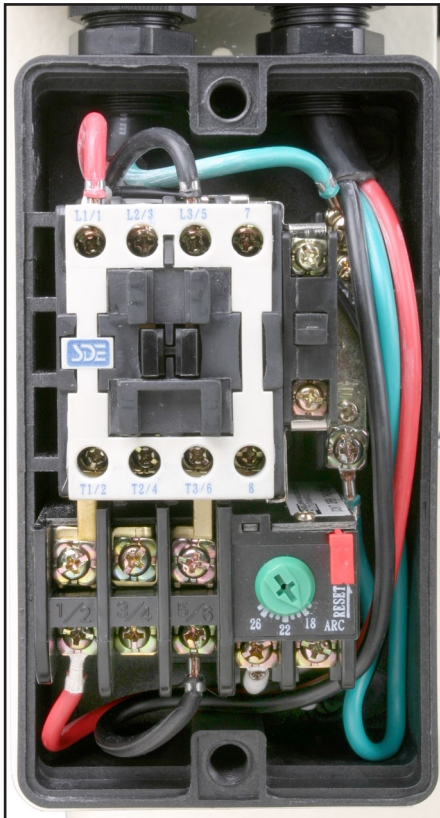
**⚠ DANGER**

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

1-PHASE  
220 VAC



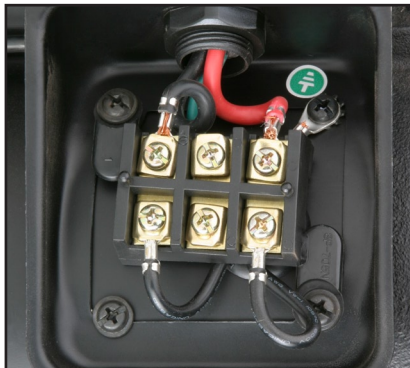
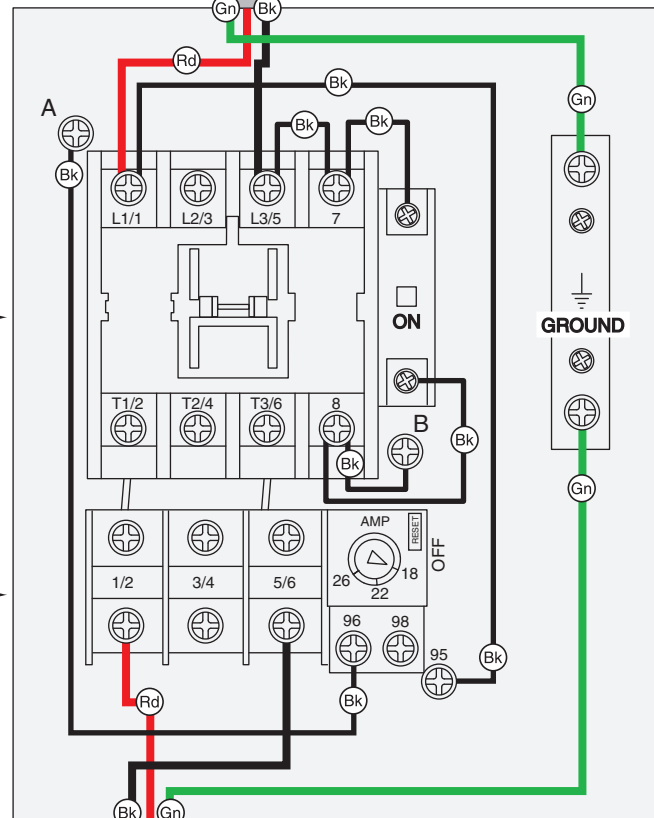
**L6-20 PLUG**  
(as recommended)



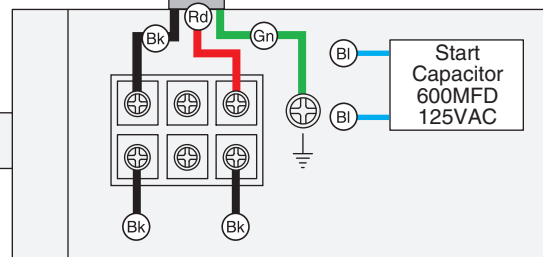
**MAGNETIC  
SWITCH  
ASSEMBLY**

Contactor

Thermal  
Overload  
Relay



**3HP  
1-PHASE  
220V  
MOTOR**

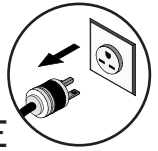


## NOTICE

The motor wiring shown here is current at the time of printing; however, always use the diagram on the inside of junction box cover when rewiring your motor.



# W1711 Wiring Diagram



COLOR KEY	
BLACK	
GREEN	
RED	

**⚠ DANGER**

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

1-PHASE  
220 VAC



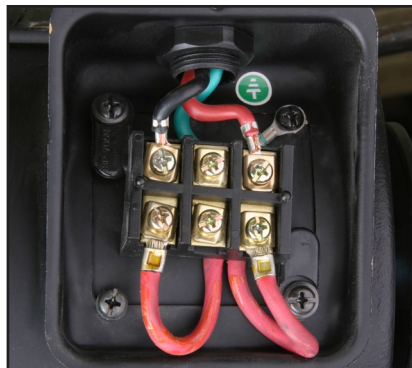
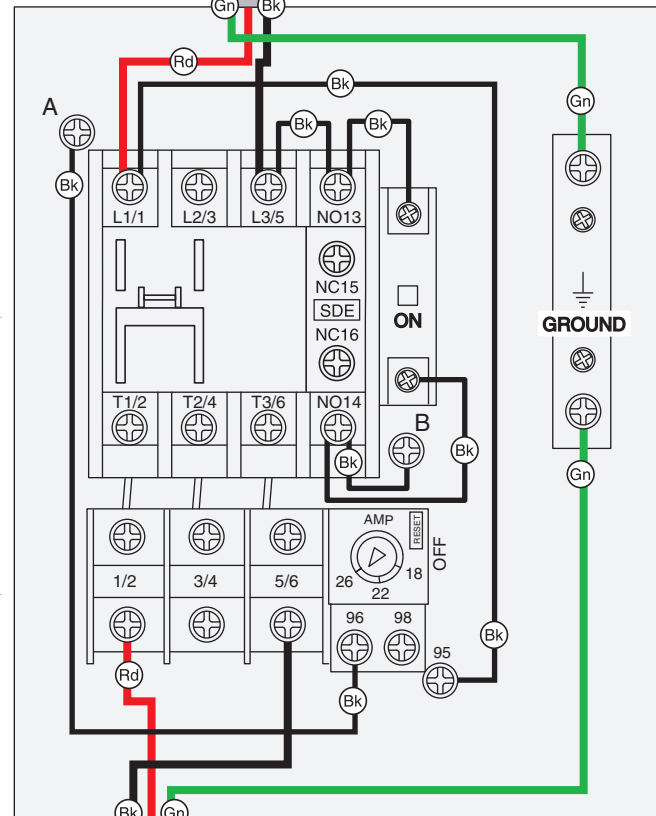
L6-30 PLUG  
(as recommended)



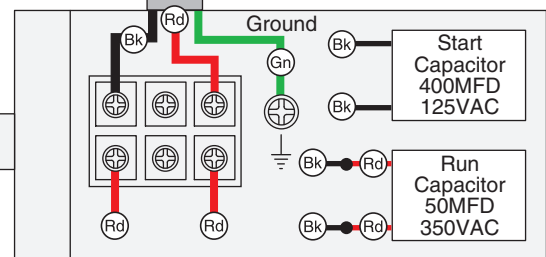
MAGNETIC  
SWITCH  
ASSEMBLY

← Contactor →

← Thermal  
Overload  
Relay →



5HP  
1-PHASE  
220V  
MOTOR



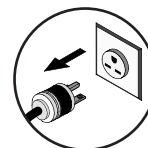
**NOTICE**

The motor wiring shown here is current at the time of printing; however, always use the diagram on the inside of junction box cover when rewiring your motor.



# 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

SYMPTOM	POSSIBLE CAUSE	CORRECTIVE ACTION
Machine does not start or a breaker trips.	<ol style="list-style-type: none"> <li>1. Plug or receptacle is at fault or wired incorrectly.</li> <li>2. Cable or wiring is open or has high resistance.</li> <li>3. The thermal overload relay below the motor contactor is tripped.</li> <li>4. Wall fuse or circuit breaker is blown or tripped.</li> <li>5. Motor connection is wired incorrectly.</li> <li>6. Power supply is faulty, or is switched <b>OFF</b>.</li> <li>7. Start capacitor is faulty.</li> <li>8. Motor ON button.</li> <li>9. Centrifugal switch is at fault.</li> <li>10. Contactor not getting energized or has burnt contacts.</li> <li>11. Motor is damaged.</li> </ol>	<ol style="list-style-type: none"> <li>1. Test power plug and receptacle for good contact and correct wiring.</li> <li>2. Troubleshoot wires for internal or external breaks, and disconnected or corroded connections; repair or replace wiring.</li> <li>3. Reset overload relay. If it continues to trip, turn up the dial to a higher shut-off amperage.</li> <li>4. Make sure circuit breaker/fuse is sized correctly for machine load or replace weak breaker.</li> <li>5. Correct motor wiring.</li> <li>6. Make sure all hot lines and grounds are operational and have correct voltage.</li> <li>7. Replace start capacitor.</li> <li>8. Replace faulty ON button.</li> <li>9. Adjust or repair centrifugal switch.</li> <li>10. Replace contactor.</li> <li>11. Repair or replace motor.</li> </ol>
Machine stalls or is underpowered.	<ol style="list-style-type: none"> <li>1. Applying too much pressure to workpiece.</li> <li>2. Low power supply voltage.</li> <li>3. Belt is slipping.</li> <li>4. Plug or receptacle is at fault.</li> <li>5. Motor connection is wired incorrectly.</li> <li>6. Pulley or sprocket is slipping on shaft.</li> <li>7. Motor has overheated.</li> <li>8. Motor bearings are at fault.</li> <li>9. Run capacitor is faulty.</li> <li>10. Contactor not getting energized or has poor contacts.</li> <li>11. Motor is at fault.</li> <li>12. Centrifugal switch is at fault.</li> </ol>	<ol style="list-style-type: none"> <li>1. Use sharp blade, and reduce the feed rate.</li> <li>2. Make sure all hot lines and grounds are operational and have correct voltage.</li> <li>3. Replace belt and/or re-tension (<b>Page 45</b>).</li> <li>4. Test power plug and receptacle for good contact and correct wiring.</li> <li>5. Correct motor wiring.</li> <li>6. Replace loose pulley and shaft.</li> <li>7. Let motor cool, clean motor fan cover, and reduce workload on machine.</li> <li>8. Rotate motor shaft for noisy or burnt bearings, replace as required.</li> <li>9. Replace run capacitor.</li> <li>10. Replace contactor.</li> <li>11. Repair or replace motor.</li> <li>12. Repair or replace centrifugal switch.</li> </ol>



SYMPTOM	POSSIBLE CAUSE	CORRECTIVE ACTION
Machine has vibration or noisy operation.	<ol style="list-style-type: none"> <li>1. Loose arbor nut.</li> <li>2. Blade is damaged.</li> <li>3. Blade is too thin.</li> <li>4. Machine is sitting on an uneven floor.</li> <li>5. Belt is worn or is loose.</li> <li>6. Pulley is loose.</li> <li>7. Wrong workpiece material (wood).</li> <li>8. Cast iron motor mount is damaged.</li> <li>9. Arbor bearings are damaged.</li> <li>10. Motor bearings are damaged.</li> </ol>	<ol style="list-style-type: none"> <li>1. Tighten the arbor nut.</li> <li>2. Replace warped, bent, or twisted blade.</li> <li>3. Use blade stabilizers.</li> <li>4. Relocate machine or shim feet.</li> <li>5. Inspect belt, replace or re-tension (<b>Page 45</b>).</li> <li>6. Remove pulley; replace shaft, pulley, and set screw as required, and re-align.</li> <li>7. Only cut wood with correct moisture content, with no pitch, glues, or resins.</li> <li>8. Carefully using leverage and a small pry bar, carefully look for loose/broken mounts and replace if necessary.</li> <li>9. Replace arbor housing bearings.</li> <li>10. Replace motor bearings.</li> </ol>

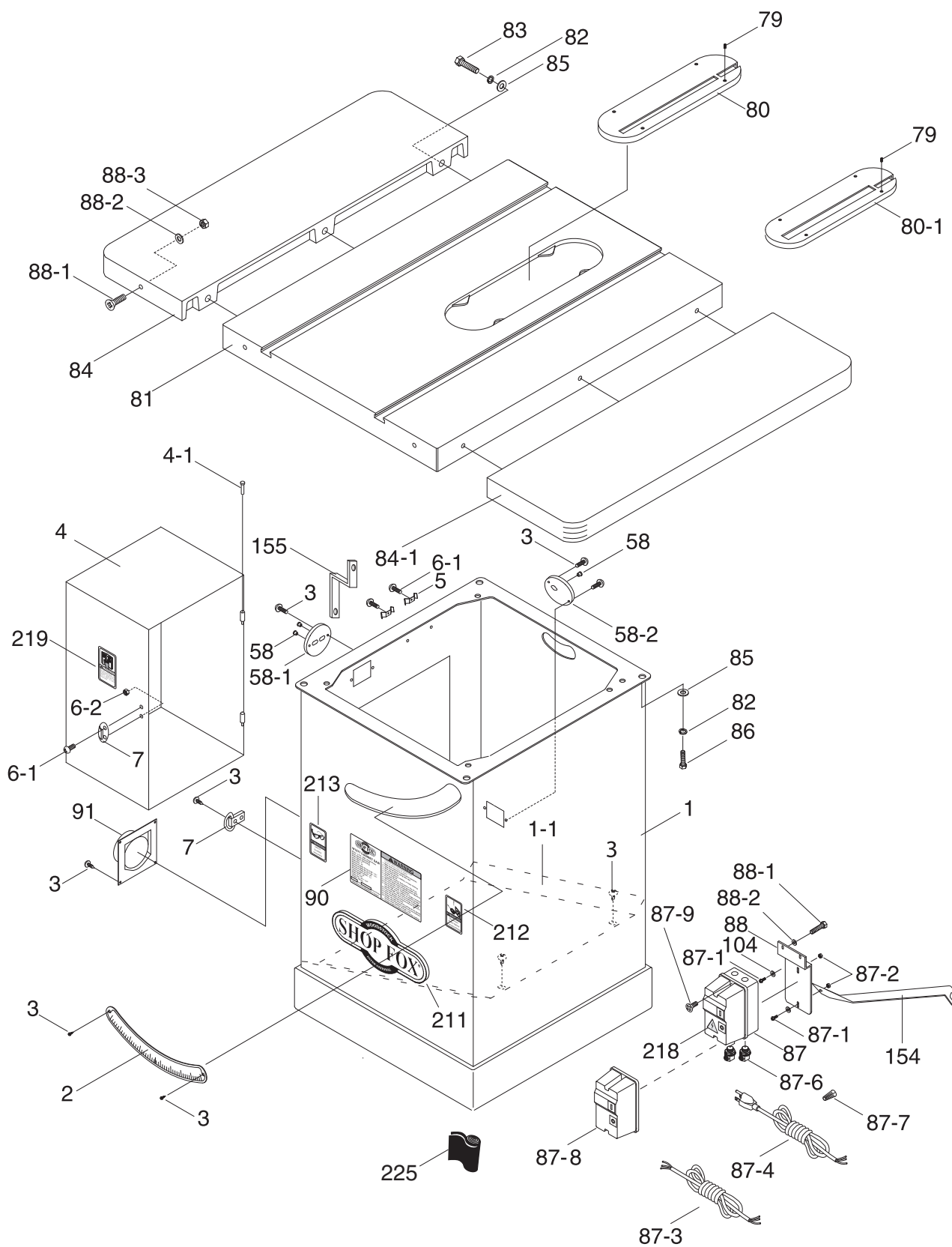
## Table Saw Operations

SYMPTOM	POSSIBLE CAUSE	CORRECTIVE ACTION
Blade is not aligned with miter slot or fence.	<ol style="list-style-type: none"> <li>1. Blade is warped.</li> <li>2. Blade is not parallel to table top.</li> <li>3. Fence is not parallel to blade.</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace blade.</li> <li>2. Adjust table top (miter slot) parallel to blade (<b>Page 41</b>) or adjust blade parallel to table (<b>Page 40</b>).</li> <li>3. Make fence parallel to blade (<b>Page 45</b>).</li> </ol>
Fence hits table top when sliding.	<ol style="list-style-type: none"> <li>1. Front rail is bolted too low on table.</li> <li>2. Rear rail is bolted too low on the table.</li> </ol>	<ol style="list-style-type: none"> <li>1. Raise front rail.</li> <li>2. Raise rear rail.</li> </ol>
Blade does not reach 90°.	<ol style="list-style-type: none"> <li>1. 90° stop bolt is out of adjustment.</li> <li>2. Pointer bracket is hitting before the blade reaches 90°.</li> <li>3. Sawdust loaded up on positive stop.</li> </ol>	<ol style="list-style-type: none"> <li>1. Adjust 90° stop bolt (<b>Page 39</b>).</li> <li>2. File down the right side of the pointer bracket until the blade can reach 90°.</li> <li>3. Clean sawdust off positive stop.</li> </ol>
Blade hits insert at 45°.	<ol style="list-style-type: none"> <li>1. Hole in insert is inadequate.</li> <li>2. Table out of alignment.</li> <li>3. Blade position is incorrect.</li> </ol>	<ol style="list-style-type: none"> <li>1. File or mill the hole in the insert.</li> <li>2. Adjust table top (miter slot) parallel to blade (<b>Page 41</b>) or adjust blade parallel to table (<b>Page 40</b>).</li> <li>3. Adjust blade position.</li> </ol>
Blade will not go beneath table surface.	<ol style="list-style-type: none"> <li>1. Table top too low.</li> </ol>	<ol style="list-style-type: none"> <li>1. Raise table by shimming w/washers.</li> </ol>
Board binds or burns when feeding through tablesaw.	<ol style="list-style-type: none"> <li>1. Dull blade.</li> <li>2. Blade is warped.</li> <li>3. Splitter out of alignment.</li> <li>4. Fence is not parallel to blade.</li> <li>5. Table top is not parallel to blade.</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace blade (<b>Page 25</b>).</li> <li>2. Replace blade (<b>Page 25</b>).</li> <li>3. Align the splitter with the blade (<b>Page 43</b>).</li> <li>4. Make fence parallel to blade (<b>Page 45</b>).</li> <li>5. Adjust table top (miter slot) parallel to blade (<b>Page 41</b>) or adjust blade parallel to table (<b>Page 40</b>).</li> </ol>



# PARTS

## Table/Body Breakdown



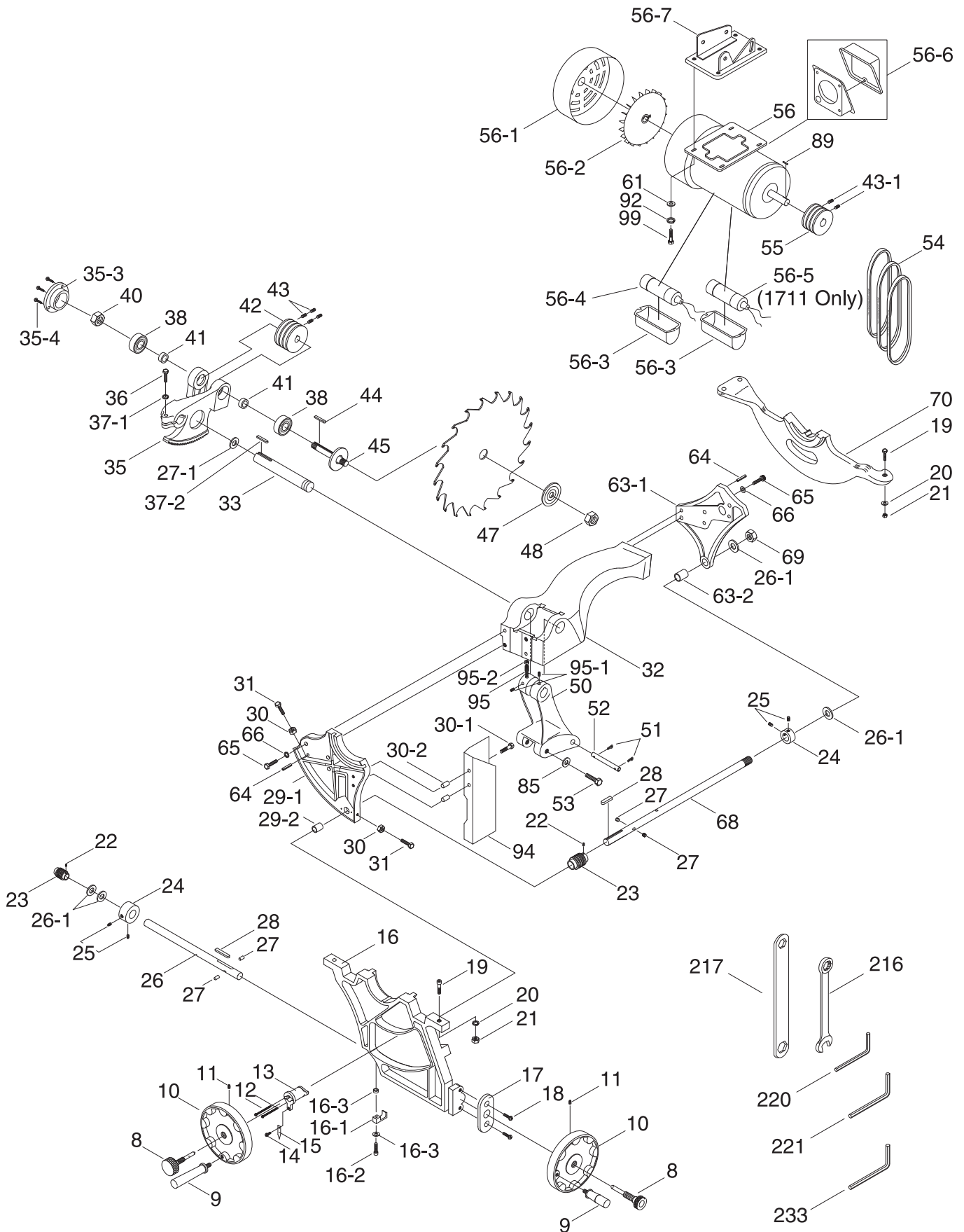


REF	PART #	DESCRIPTION
1	X1677001	CABINET
1-1	X1677001-1	LOWER PANEL
2	X1677002	SCALE
3	XPHTEK6	TAP SCREW #10 X 3/8
4	X1677004	MOTOR COVER
4-1	X1677004-1	HINGE PIN
5	X1677005	CORD CLAMP
6-1	XPS24	PHLP HD SCR 8-32 X 3/8
6-2	XPN14	HEX NUT 8-32
7	X1677007	LATCH 2 PCS
58	X1677058	SNAP IN STRAIN RELIEF
58-1	X1677058-1	CORD CLAMP PLATE 2 HOLE
58-2	X1677058-2	CORD CLAMP PLATE 1 HOLE
79	XPSS07	SET SCREW 1/4-20 X 1/2
80	X1677080	STANDARD TABLE INSERT
80-1	X1677080-1	DADO TABLE INSERT
81	X1677081	TABLE
82	XPLW04	LOCK WASHER 3/8
83	XPB24	HEX BOLT 3/8-16 X 1-1/4
84	X1677084	EXTENSION WING (LEFT)
84-1	X1677084-1	EXTENSION WING (RIGHT)
85	XPW02	FLAT WASHER 3/8
86	XPSB16	CAP SCREW 3/8-16 X 3/4
87	X1677087	MAGNETIC SWITCH W1677
87	X1711087	MAGNETIC SWITCH W1711

REF	PART #	DESCRIPTION
87-1	XPS31	PHLP HD SCR 10-24 X 1-3/4
87-2	XPN07	HEX NUT 10-24
87-3	X1677087-3	MOTOR CORD
87-4	X1677087-4	POWER CORD
87-6	X1677087-6	STRAIN RELIEF
87-7	X1677087-7	WIRE CONNECTORS
87-8	X1677087-8	SWITCH COVER
87-9	X1677087-9	PLASTIC SWITCH SCREW
88	X1677088	SWITCH PLATE
88-1	XPFH25	FLAT HD SCR 5/16-18 X 1
88-2	XPW07	FLAT WASHER 5/16
88-3	XPN02	HEX NUT 5/16-18
90	X1677090	W1677 WARNING ID LABEL
90	X1711090	W1711 WARNING ID LABEL
91	W1010	DUST HOSE ADAPTER
104	XPW03	FLAT WASHER #10
154	X1677154	SWITCH PLATE BRACE
155	X1677155	MOTOR BRACE
211	D3377	SHOP FOX LOGO PLATE
212	XLABEL-02	DISCONNECT POWER LABEL
213	XLABEL-01	SAFETY GLASSES LABEL
218	XLABEL-04	ELECTRICITY LABEL
219	XLABEL-08	READ MANUAL LABEL
225	X1677225	BLACK STRIPE

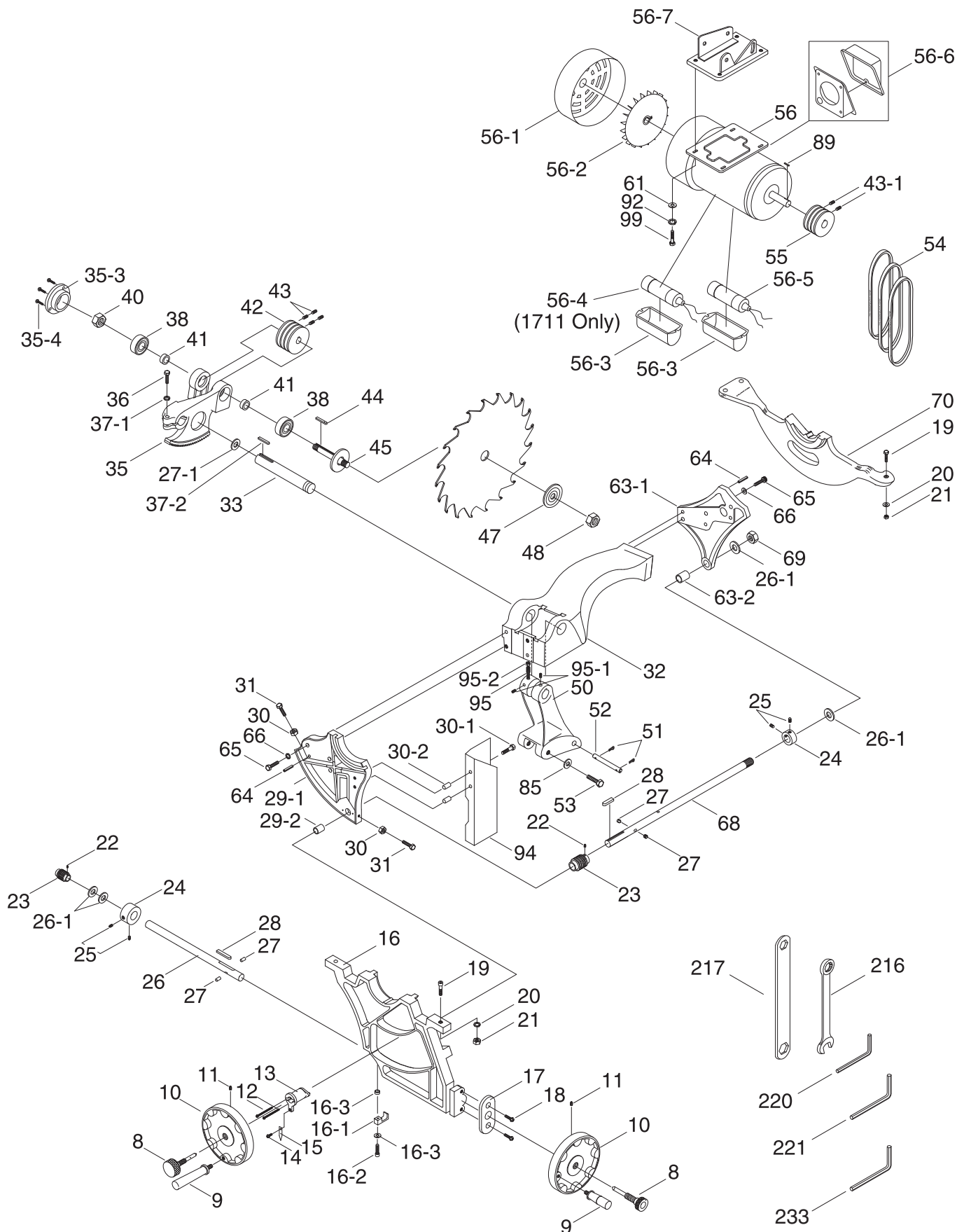


# Motor/Trunnion Breakdown



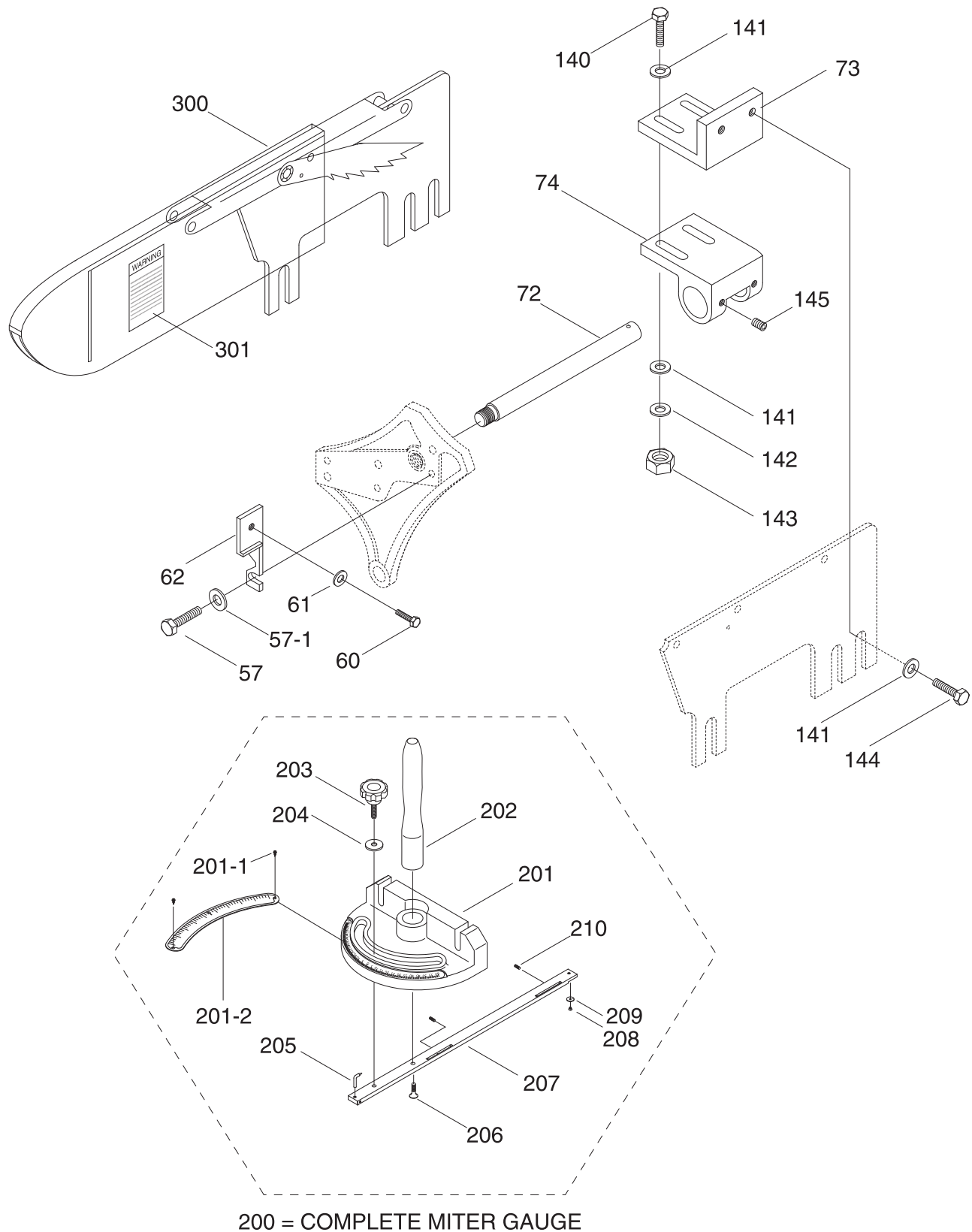


# Motor/Trunnion Breakdown





# Guard/Miter Gauge Breakdown





REF	PART #	DESCRIPTION
57	XPB15	HEX BOLT 5/16-18 X 3/8
57-1	XPW07	FLAT WASHER 5/16
60	XPB07	HEX BOLT 5/16-18 X 3/4
61	XPW07	FLAT WASHER 5/16
62	X1677062	BRACKET
72	X1677072	SHAFT
73	X1677073	UPR BLADE GUARD BRACKET
74	X1677074	LWR BLADE GUARD BRACKET
140	XPB11	HEX BOLT 5/16-18 X 1-1/2
141	XPW07	FLAT WASHER 5/16
142	XPLW01	LOCK WASHER 5/16
143	XPNO2	HEX NUT 5/16-18
144	XPB03	HEX BOLT 5/16-18 X 1
145	XPSS02	SET SCREW 5/16-18 X 3/8
200	X1677200	COMPLETE MITER GAUGE

REF	PART #	DESCRIPTION
201	X1677201	MITER GAUGE BODY
201-1	X1677201-1	RIVET 2 X 4
201-2	X1677201-2	MITER GAUGE SCALE
202	X1677202	MITER GAUGE HANDLE
203	X1677203	STAR KNOB 5/16-18 X 1-1/4
204	XPW07	FLAT WASHER 5/16
205	X1677205	POINTER
206	XPFH04	FLAT HD SCR 1/4-20 X 5/8
207	X1677207	MITER SLIDE BAR
208	X1677208	SPECIAL SCREW
209	X1677209	SPECIAL WASHER
210	XPSS31	SET SCREW 10-24 X 5/8
300	X1677300	BLADE GUARD ASSEMBLY
301	X1677301	BLADE GUARD LABEL

## 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](http://www.shopfoxtools.com) to order new labels.



# 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 \_\_\_\_\_

Street \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Phone # \_\_\_\_\_ Email \_\_\_\_\_ Invoice # \_\_\_\_\_

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?

\_\_\_\_\_ Advertisement

\_\_\_\_\_ Friend

\_\_\_\_\_ Local Store

\_\_\_\_\_ Mail Order Catalog

\_\_\_\_\_ Website

\_\_\_\_\_ Other:

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

\_\_\_\_\_ 0-2 Years

\_\_\_\_\_ 2-8 Years

\_\_\_\_\_ 8-20 Years

\_\_\_\_\_ 20+ Years

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

\_\_\_\_\_ 0-2

\_\_\_\_\_ 3-5

\_\_\_\_\_ 6-9

\_\_\_\_\_ 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?

\_\_\_\_\_ 20-29

\_\_\_\_\_ 30-39

\_\_\_\_\_ 40-49

\_\_\_\_\_ 50-59

\_\_\_\_\_ 60-69

\_\_\_\_\_ 70+

7. What is your annual household income?

\_\_\_\_\_ \$20,000-\$29,000

\_\_\_\_\_ \$30,000-\$39,000

\_\_\_\_\_ \$40,000-\$49,000

\_\_\_\_\_ \$50,000-\$59,000

\_\_\_\_\_ \$60,000-\$69,000

\_\_\_\_\_ \$70,000+

8. Which of the following magazines do you subscribe to?

\_\_\_\_\_ Cabinet Maker

\_\_\_\_\_ Popular Mechanics

\_\_\_\_\_ Today's Homeowner

\_\_\_\_\_ Family Handyman

\_\_\_\_\_ Popular Science

\_\_\_\_\_ Wood

\_\_\_\_\_ Hand Loader

\_\_\_\_\_ Popular Woodworking

\_\_\_\_\_ Wooden Boat

\_\_\_\_\_ Handy

\_\_\_\_\_ Practical Homeowner

\_\_\_\_\_ Woodshop News

\_\_\_\_\_ Home Shop Machinist

\_\_\_\_\_ Precision Shooter

\_\_\_\_\_ Woodsmith

\_\_\_\_\_ Journal of Light Cont.

\_\_\_\_\_ Projects in Metal

\_\_\_\_\_ Woodwork

\_\_\_\_\_ Live Steam

\_\_\_\_\_ RC Modeler

\_\_\_\_\_ Woodworker West

\_\_\_\_\_ Model Airplane News

\_\_\_\_\_ Rifle

\_\_\_\_\_ Woodworker's Journal

\_\_\_\_\_ Modeltec

\_\_\_\_\_ Shop Notes

\_\_\_\_\_ Other:

\_\_\_\_\_ Old House Journal

\_\_\_\_\_ Shotgun News

9. Comments: \_\_\_\_\_

\_\_\_\_\_

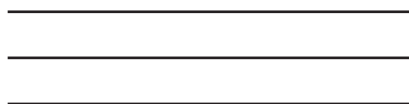
\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_



FOLD ALONG DOTTED LINE



Place  
Stamp  
Here



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



FOLD ALONG DOTTED LINE

TAPE ALONG EDGES--PLEASE DO NOT STAPLE







