

# MODEL W1819/W1820 10" CABINET SAW



# **OWNER'S MANUAL**

(FOR MODELS MANUFACTURED SINCE 09/11)

Phone: (360) 734-3482 · Online Technical Support: tech-support@shopfox.biz



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



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

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

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

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

## **WARNING!**

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

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

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

## SHOP FOX

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## INTRODUCTION

#### **Contact Info**

We are committed to customer satisfaction. If you have any questions or need help, use the information below to contact us.

IMPORTANT: Before contacting, please get the original purchase receipt, serial number, and manufacture date of your machine. This information is required for all Technical Support calls and it will help us help you faster.

Woodstock International Technical Support Phone: (360) 734-3482 Email: techsupport@woodstockint.com

We want your feedback on this manual. What did you like about it? Where could it be improved? Please take a few minutes to give us feedback.

> Technical Documentation Manager P.O. Box 2309 Bellingham, WA 98227 Email: manuals@woodstockint.com

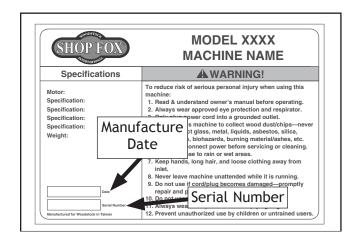
## Manual Accuracy

We are proud to provide a high-quality owner's manual with your new machine!

We made every effort to be exact with the instructions, specifications, drawings, and photographs contained inside. Sometimes we make mistakes, but our policy of continuous improvement also means that sometimes the machine you receive will be slightly different than what is shown in the manual.

If you find this to be the case, and the difference between the manual and machine leaves you confused about a procedure, check our website for an updated version. We post current manuals and manual updates for free on our website at www.woodstockint.com.

Alternatively, you can call our Technical Support for help. Before calling, make sure you write down the Manufacture Date and Serial Number from the machine ID label (see below). Also, if available, have a copy of your original purchase receipt on hand. This information is required for all Tech Support calls.





#### **Controls and Features**

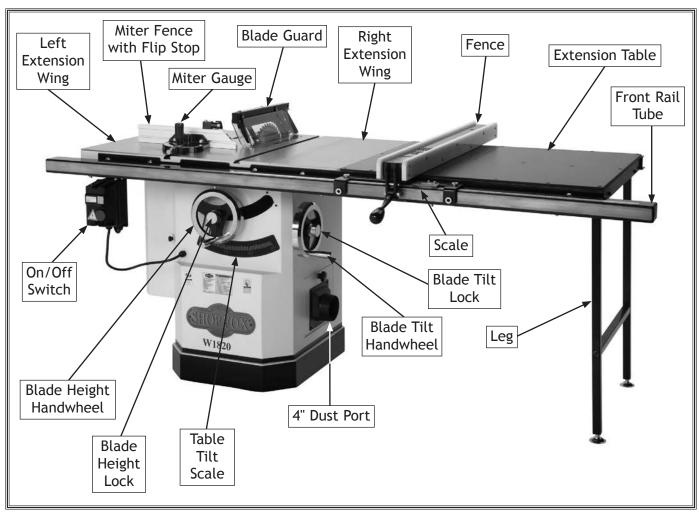


Figure 1. Identification (Model W1820 shown).

## **AWARNING**

For Your Own Safety Read Instruction Manual Before Operating Jointer

- a) Wear eve protection.
- b) Always keep cutterhead and drive guards in place and in proper operating condition. ALWAYS replace cutterhead guard after rabbeting operations.
- c) Never make jointing or rabbeting cuts deeper than 1/8" or planing cuts deeper than 1/16"
- d) Always use hold-down or push blocks when jointing material narrower than 3" or surface planing material thinner than 3".
- e) Never perform jointing, planing, or rabbeting cuts on pieces shorter than 8" in length.



# MACHINE SPECIFICATIONS



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### MODEL W1819 10" 3 HP CABINET TABLE SAW WITH RIVING KNIFE

Product Dimensions	
Weight	62 x 45-1/2 x 40 in.
Shipping Dimensions	
Carton #1	
Type Content Weight Length x Width x Height	Machine & Table Extension
Carton #2	
Type  Content  Weight  Length x Width x Height	Fence 25 lbs.
Carton #3	
Type  Content  Weight  Length x Width x Height	Rails 45 lbs.
Electrical	
Power Requirement Prewired Voltage Full-Load Current Rating Minimum Circuit Size Connection Type Power Cord Included Power Cord Length Power Cord Gauge Plug Included Included Plug Type	
Switch Type Magn	etic Switch w/Overload Protection

#### Motors

N	۱aı	ın

	Main	n	
		Horsepower	3 HP
		PhaseSir	
		Amps	12.8A
		Speed	3450 RPM
		Type TEFC Capacitor-Start	Induction
		Power Transfer Triple V-	
		Bearings	ubricated
Main	Spec	cifications	
	Main	n Information	
		Table Saw Type	
		Maximum Blade Diameter	
		Arbor Size	
		Arbor Speed	
		Maximum Width of Dado	
		Blade Tilt Direction	
		Max Blade Tilt	
		Maximum Depth of Cut At 49 Degrees	
		Maximum Depth of Cut At 45 Degrees	
		Max Rip Right of Blade w/Included Fence & Rails.	
		Max Rip Left of Blade w/Included Fence & Rails	13-1/2 111.
	Addi	litional Blade Information	
		Included Blade Information	
		Riving Knife/Spreader Thickness	
		Required Blade Body Thickness	
		Required Blade Kerf Thickness	
		Rim Speed at Max Blade Diameter	1,300 FPM
	Table	le Information	
		Floor to Table Height	
		Table Size with Extension Wings Width	
		Table Size with Extension Wings Depth	
		Distance Front of Table to Center of Blade	
		Distance Front of Table to Blade At Maximum Cut	
		Main Table Size Thickness	1-7/8 in.
	Fenc	ice Information	
		Fence Type	
		Fence Size Length	
		Fence Size Width	
		Fence Size Height	
		Fence Rail Type	
		Fence Rail Length	62 in.

#### Miter Gauge Information

Miter	Gauge Slot Type	T-Slot
Miter	Gauge Slot Size Width	3/4 in.
Miter	Gauge Slot Size Height	3/8 in.

Fence Rail Width...... 2-3/4 in. 



#### Construction

Table	Precision-Ground Cast Iron
Wings	Precision-Ground Cast Iron
Cabinet	Pre-Formed Steel
Trunnions	Cast Iron
Fence Assembly	
Rails	
Miter Guage Construction	
Guard	
Body/Cabinet Paint Type/Finish	Powder Coated
Arbor Bearings	Sealed & Permanently Lubricated
Other Related Information	
Number of Dust Ports	
Dust Port Size	4 in.
Compatible Mobile Base	
r	
Country of Origin	China
Warranty	
Approximate Assembly & Setup Time	
Serial Number Location	

#### **Features**

Other

T-slot miter gauge with extruded aluminum fence and flip stop

Precision-Ground Cast-Iron Table

**Cast-Iron Trunnions** 

4" Dust Port

Riving Knife and Blade Guard

Camlock T-Shaped Fence with HDPE Face

Quick-Release Device for Changing Guard/Riving Knife

**Powder Coated Paint** 

Standard and Dado Table Inserts

Quick Release Riving Knife

Quick Release Motor Guard

**Quick Release Splitter Assembly** 

Easy Glide Fence System

Knurled Knobs for Adjusting Fence

Nylon Runners Inside Fence Head Assembly

Recessed Screw Holding Table Insert



# MACHINE SPECIFICATIONS



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### MODEL W1820 10" 3 HP CABINET TABLE SAW WITH RIVING KNIFE AND LONG RAILS

Product Dimensions	
Weight	546 lbs.
Width (side-to-side) x Depth (front-to-back) x Height	
Footprint (Length x Width)	
Shipping Dimensions	
Carton #1	
Туре	Cardboard Box on Wood Skids
Content	Machine & Table Extension
Weight	474 lbs.
Length x Width x Height	
Carton #2	
Туре	Cardboard Box
Content	
Weight	24 lbs.
Length x Width x Height	43 x 17 x 8 in.
Carton #3	
Туре	Cardboard Box
Content	Rails
Weight	69 lbs.
Length x Width x Height	90 x 7 x 5 in.
Electrical	
Power Requirement	230V, Single-Phase, 60 Hz
Prewired Voltage	230V
Full-Load Current Rating	
Minimum Circuit Size	
Connection Type	
Power Cord Included	
Power Cord Length	
Power Cord Gauge	
Plug Included	
Included Plug Type	
Switch Type M	agnetic Switch w/Overload Protection



#### Motors

м	ain	

3 HP
Single-Phase
12.8A
3450 RPM
TEFC Capacitor-Start Induction
Triple V-Belt Drive
Shielded & Permanently Lubricated

#### **Main Specifications**

#### Main Information

Table Saw Type	Cabinet
Maximum Blade Diameter	10 in.
Arbor Size	5/8 in.
Arbor Speed	4300 RPM
Maximum Width of Dado	13/16 in.
Blade Tilt Direction	Left
Max Blade Tilt	45 deg.
Maximum Depth of Cut At 90 Degrees	3-1/8 in.
Maximum Depth of Cut At 45 Degrees	2-3/16 in.
Max Rip Right of Blade w/Included Fence & Rails	49 in.
Max Rip Left of Blade w/Included Fence & Rails	13-1/2 in.

#### **Additional Blade Information**

Included Blade Information	10" x 40T
Riving Knife/Spreader Thickness	0.100 in.
Required Blade Body Thickness	0.071 - 0.094 in.
Required Blade Kerf Thickness	0.102 - 0.126 in.
Rim Speed at Max Blade Diameter	11,300 FPM

#### **Table Information**

Floor to Table Height	34 in.
Table Size with Extension Wings Width	72 in.
Table Size with Extension Wings Depth	
Distance Front of Table to Center of Blade	
Distance Front of Table to Blade At Maximum Cut	12-1/2 in.
Main Table Size Thickness	1-7/8 in.

#### Fence Information

Fence Type	Camlock T-Shape w/HDPE Face
Fence Size Length	39-5/16 in.
Fence Size Width	3-7/8 in.
Fence Size Height	2-1/2 in.
Fence Rail Type	Square Steel Tubing
Fence Rail Length	82 in.
Fence Rail Width	2-3/4 in.
Fence Rail Height	2 in.
<del>-</del>	

#### Miter Gauge Information

Miter Gauge Slot Type	T-Slot
Miter Gauge Slot Size Width	
Miter Gauge Slot Size Height	



#### Construction

Table	Precision-Ground Cast Iron Pre-Formed Steel Cast Iron Steel with HDPE Side Plates Steel Cast Iron with Steel Bar
GuardBody/Cabinet Paint Type/FinishArbor Bearings	Powder Coated
Other Related Information	
Number of Dust Ports  Dust Port Size  Compatible Mobile Base	4 in.
r	
Country of Origin	2 Years

#### **Features**

Other

Precision-Ground Cast-Iron Table

**Cast-Iron Trunnions** 

4" Dust Port

T-Slot Miter Gauge

Riving Knife and Blade Guard

Camlock T-Shaped Fence with HDPE Face

Quick-Release Device for Changing Guard/Riving Knife

**Powder Coated Paint** 

Standard and Dado Table Inserts

Quick Release Riving Knife

Quick Release Motor Guard

Quick Release Splitter Assembly

Easy Glide Fence System

Knurled Knobs for Adjusting Fence

Nylon Runners Inside Fence Head Assembly

T-Square Type Fence System

Recessed Screw Holding Table Insert

Device on Blade Guard Allows Enabling or Disabling of Anti-Kickback Pawls



## **SAFETY**

## For Your Own Safety, Read Manual Before Operating Machine

The purpose of safety symbols is to attract your attention to possible hazardous conditions. This manual uses a series of symbols and signal words intended to convey the level of importance of the safety messages. The progression of symbols is described below. Remember that safety messages by themselves do not eliminate danger and are not a substitute for proper accident prevention measures—this responsibility is ultimately up to the operator!

## **ADANGER**

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

## **A**WARNING

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

## **A**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 or a situation that may cause damage to the machinery.

## Standard Machinery Safety Instructions

**OWNER'S MANUAL.** Read and understand this owner's manual BEFORE using machine.

TRAINED OPERATORS ONLY. Untrained operators have a higher risk of being hurt or killed. Only allow trained/supervised people to use this machine. When machine is not being used, disconnect power, remove switch keys, or lock-out machine to prevent unauthorized use—especially around children. Make workshop kid proof!

**DANGEROUS ENVIRONMENTS.** Do not use machinery in areas that are wet, cluttered, or have poor lighting. Operating machinery in these areas greatly increases the risk of accidents and injury.

MENTAL ALERTNESS REQUIRED. Full mental alertness is required for safe operation of machinery. Never operate under the influence of drugs or alcohol, when tired, or when distracted.

ELECTRICAL EQUIPMENT INJURY RISKS. You can be shocked, burned, or killed by touching live electrical components or improperly grounded machinery. To reduce this risk, only allow an electrician or qualified service personnel to do electrical installation or repair work, and always disconnect power before accessing or exposing electrical equipment.

pisconnect power First. Always disconnect machine from power supply BEFORE making adjustments, changing tooling, or servicing machine. This eliminates the risk of injury from unintended startup or contact with live electrical components.

EYE PROTECTION. Always wear ANSI-approved safety glasses or a face shield when operating or observing machinery to reduce the risk of eye injury or blindness from flying particles. Everyday eyeglasses are not approved safety glasses.



- WEARING PROPER APPAREL. Do not wear clothing, apparel, or jewelry that can become entangled in moving parts. Always tie back or cover long hair. Wear non-slip footwear to avoid accidental slips, which could cause loss of workpiece control.
- HAZARDOUS DUST. Dust created while using machinery may cause cancer, birth defects, or long-term respiratory damage. Be aware of dust hazards associated with each workpiece material, and always wear a NIOSH-approved respirator to reduce your risk.
- HEARING PROTECTION. Always wear hearing protection when operating or observing loud machinery. Extended exposure to this noise without hearing protection can cause permanent hearing loss.
- REMOVE ADJUSTING TOOLS. Tools left on machinery can become dangerous projectiles upon startup. Never leave chuck keys, wrenches, or any other tools on machine. Always verify removal before starting!
- INTENDED USAGE. Only use machine for its intended purpose—never make modifications without prior approval from Woodstock International. Modifying machine or using it differently than intended will void the warranty and may result in malfunction or mechanical failure that leads to serious personal injury or death!
- AWKWARD POSITIONS. Keep proper footing and balance at all times when operating machine. Do not overreach! Avoid awkward hand positions that make workpiece control difficult or increase the risk of accidental injury.
- CHILDREN & BYSTANDERS. Keep children and bystanders at a safe distance from the work area. Stop using machine if they become a distraction.

- **FORCING MACHINERY.** Do not force machine. It will do the job safer and better at the rate for which it was designed.
- **NEVER STAND ON MACHINE.** Serious injury may occur if machine is tipped or if the cutting tool is unintentionally contacted.
- **STABLE MACHINE.** Unexpected movement during operation greatly increases risk of injury or loss of control. Before starting, verify machine is stable and mobile base (if used) is locked.
- USE RECOMMENDED ACCESSORIES. Consult this owner's manual or the manufacturer for recommended accessories. Using improper accessories will increase risk of serious injury.
- **UNATTENDED OPERATION.** To reduce the risk of accidental injury, turn machine *OFF* and ensure all moving parts completely stop before walking away. Never leave machine running while unattended.
- MAINTAIN WITH CARE. Follow all maintenance instructions and lubrication schedules to keep machine in good working condition. A machine that is improperly maintained could malfunction, leading to serious personal injury or death.
- CHECK DAMAGED PARTS. Regularly inspect machine for any condition that may affect safe operation. Immediately repair or replace damaged or mis-adjusted parts before operating machine.
- MAINTAIN POWER CORDS. When disconnecting cord-connected machines from power, grab and pull the plug—NOT the cord. Pulling the cord may damage the wires inside, resulting in a short. Do not handle cord/plug with wet hands. Avoid cord damage by keeping it away from heated surfaces, high traffic areas, harsh chemicals, and wet/damp locations.



## Additional Safety for Table Saws

## **AWARNING**

Serious cuts, amputation, or death can occur from contact with rotating saw blade during operation. Workpieces, broken blades, or flying particles thrown by blade can blind or strike operators or bystanders with deadly force. To reduce the risk of these hazards, operator and bystanders MUST completely heed the hazards and warnings below.

HAND & BODY POSITIONING. Keep hands away from saw blade and out of blade path during operation, so they cannot accidentally slip into blade. Only operate at front of machine and always stand to side of blade path. Never reach behind or over blade.

**BLADE GUARD.** The blade guard protects operator from rotating saw blade. Make sure blade guard is installed, adjusted correctly, and used for all possible "through cuts." Promptly repair or replace if damaged. Re-install immediately after operations that require its removal.

**RIVING KNIFE.** Use riving knife for all "non-through cuts." Make sure it is aligned and positioned correctly. Promptly repair or replace it if damaged.

**KICKBACK.** Kickback occurs when saw blade ejects workpiece back toward operator. Know how to reduce risk of kickback, and learn how to protect yourself if it does occur.

FEEDING WORKPIECE. Feeding workpiece incorrectly increases risk of kickback. Always allow blade to reach full speed before cutting, feed workpiece from front of saw, making sure workpiece is flat against table and a fence, miter gauge, or other guide is used to feed workpiece in a straight line. Feed cuts through to completion. Never start saw with workpiece touching blade or pull workpiece from behind blade. Never back workpiece out of cut, move it sideways, or perform a "freehand" operation. Never plunge cut.

**PUSH STICKS/PUSH BLOCKS.** To reduce risk of accidental blade contact, use push sticks/push blocks whenever possible. In event of an accident, these will often take damage that would have occurred to hands/fingers.

**FENCE.** To reduce risk of kickback, make sure fence remains properly adjusted and parallel with blade. Always lock fence before using.

**CUT-OFF PIECES.** To avoid risk of injury due to blade contact, turn saw *OFF* and allow blade to completely stop before removing cut-off pieces near blade or trapped between blade and table insert. Never use your hands to move cut-off pieces away from blade while saw is running.

**BLADE ADJUSTMENTS.** Adjusting blade height or tilt during operation increases risk of crashing blade and sending metal fragments flying with deadly force at operator or bystanders. Only adjust blade height and tilt when blade is completely stopped and saw is **OFF**.

**CHANGING BLADES.** Accidental startup while changing saw blade can result in serious injury. To reduce risk of accidental blade contact, always disconnect power before changing blades.

**DAMAGED SAW BLADES.** Damaged saw blade teeth can become deadly projectiles. Never use blades that have been dropped or damaged.

DADO AND RABBET OPERATIONS. Dado and rabbeting operations require special attention since they must be performed with blade guard removed, which increases risk of blade contact. DO NOT attempt dado or rabbeting operations without first reading these sections in this manual.

CUTTING CORRECT MATERIAL. Cutting metal, glass, stone, tile, etc., increases risk of operator injury due to kickback or flying particles. Only cut natural and man-made wood products, laminate-covered wood products, and some plastics. Never cut materials not intended for this saw.



## **Preventing Kickback**

Below are ways to avoid the most common causes of kickback:

- Only cut workpieces with at least one smooth and straight edge. DO NOT cut warped, cupped or twisted wood.
- Keep the blade guard installed and working correctly for all through-cuts.
- Never attempt freehand cuts. If the workpiece is not fed parallel with the blade, kickback will likely occur. Always use the rip fence or miter gauge to support the workpiece.
- Make sure the spreader or riving knife is aligned with the blade. A misaligned spreader or riving knife can cause the workpiece to catch or bind, increasing the chance of kickback.
- Take the time to check and adjust the rip fence parallel with the blade; otherwise, the chances of kickback are extreme.
- The spreader or riving knife maintains the kerf in the workpiece, reducing the chance of kickback. Always use the riving knife for all non-through operations, unless a dado blade is installed. Always use the spreader with the blade guard for all through cuts.
- Feed cuts through to completion. Anytime you stop feeding a workpiece in the middle of a cut, the chance of kickback is greatly increased.
- Keep the blade guard installed and in good working order. Only remove it when performing non-through cuts and immediately re-install the blade guard when finished. Remember, always use the riving knife for all non-through operations, unless a dado blade is installed.
- Make multiple, shallow passes when performing a non-through cut. Making a deep non-through cut will greatly increase the chance of kickback.

 Never move the workpiece backwards or try to back it out of a cut while the blade is moving. If you cannot complete a cut for some reason, stop the saw motor and allow the blade to completely stop before backing the workpiece out. Promptly fix the condition that prevented you from completing the cut before starting the saw again.

## Protecting Yourself From Kickback

Even if you know how to prevent kickback, it may still happen. Here are some ways to protect yourself if kickback DOES occur:

- Stand to the side of the blade during every cut. If kickback does occur, the thrown workpiece usually travels directly in front of the blade.
- Wear safety glasses or a face shield. In the event of kickback, your eyes and face are the most vulnerable part of your body.
- Never, for any reason, place your hand behind the blade. Should kickback occur, your hand may be pulled into the blade, which could cause amputation.
- Use a push stick to keep your hands farther away from the moving blade. If kickback occurs, the push stick will most likely take the damage that your hand would have received.
- Use featherboards or anti-kickback devices to prevent or slow down kickback.

## AWARNING

Statistics show that most common accidents among table saw users can be linked to kickback. Kickback is typically defined as the high-speed ejection of stock from the table saw toward its operator. In addition to the danger of the operator or others in the area being struck by the flying stock, it is often the case that the operator's hands are pulled into the blade during the kickback.



## Glossary of Terms

The following is a list of common definitions, terms and phrases used throughout this manual as they relate to this table saw and woodworking in general. Become familiar with these terms for assembling, adjusting or operating this machine.

- **Arbor:** Rotating metal shaft to which saw blade is mounted that extends from the drive mechanism.
- Bevel Edge Cut: Tilting the arbor and saw blade to an angle between 0° and 45° to cut a beveled edge onto a workpiece.
- Blade Guard: Metal or plastic safety device that mounts over the saw blade. Its function is to prevent the operator from coming into contact with the saw blade.
- **Crosscut:** Cutting operation in which the fence is used to cut across the grain, or the miter gauge is used to cut across the shortest width of the workpiece.
- **Dado Blade:** Blade or set of blades that are used to cut wide grooves and rabbets.
- **Dado Cut:** "Non-through" cutting operation that uses a dado blade to cut a flat-bottomed groove into the face of the workpiece.
- **Featherboard:** Safety device used to keep the workpiece against the rip fence and table surface.
- **Kerf:** The resulting cut or gap in the workpiece after the saw blade passes through during a cutting operation.
- **Kickback:** An event in which the workpiece is propelled back towards the operator at a high rate of speed.

- Parallel: Being an equal distance apart at every point along two given lines or planes. I.e. the rip fence face is parallel to the face of the saw blade.
- Non-Through Cut: A cut in which the blade does not cut through the top of the workpiece. Refer to Page 32 for more details.
- Perpendicular: Lines or planes that intersect and form right angles. I.e. the blade is perpendicular to the table surface.
- **Push Stick:** Safety device used to push the workpiece through a cutting operation. Used most often when rip cutting thin workpieces.
- Rabbet: Cutting operation that creates an L-shaped channel along the edge of the workpiece.
- Riving Knife: Metal plate located behind the blade. It maintains the kerf opening in the wood when performing a cutting operation. Refer to Page 38 for more details.
- **Straightedge:** A tool used to check the flatness, parallelism, or consistency of a surface(s).
- **Through Cut:** A sawing operation in which the workpiece is completely sawn through.
- **Rip Cut:** Cutting operation in which the rip fence is used to cut with the grain, or across the widest width of the workpiece.



## **ELECTRICAL**

## **Circuit Requirements**

This machine must be connected to the correct size and type of power supply circuit, or fire or electrical damage may occur. Read through this section to determine if an adequate power supply circuit is available. If a correct circuit is not available, a qualified electrician MUST install one before you can connect the machine to power.

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

#### Full-Load Current Rating

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

Full-Load Current Rating......12.8 Amps

#### **Circuit Requirements**

This machine is prewired to operate on a 220V power supply circuit that has a verified ground and meets the following requirements:

Circuit Type	.ZZUV/Z4UV, 6U HZ, Single-Phase
Circuit Size	
Plug/Receptacle	NEMA 6-20

## **AWARNING**

The machine must be properly set up before it is safe to operate. DO NOT connect this machine to the power source until instructed to do later in this manual.



Incorrectly wiring or grounding this machine can cause electrocution, fire, or machine damage. To reduce this risk, only an electrician or qualified service personnel should do any required electrical work on this machine.

#### NOTICE

The circuit requirements listed in this manual apply to a dedicated circuit—where only one machine will be running at a time. If this machine will be connected to a shared circuit where multiple machines will be running at the same time, consult with an electrician to ensure that the circuit is properly sized for safe operation.



## **Grounding Requirements**

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

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

Check with a qualified electrician or service personnel if you do not understand these grounding requirements, or if you are in doubt about whether the tool is properly grounded. If you ever notice that a cord or plug is damaged or worn, disconnect it from power, and immediately replace it with a new one.

#### For 220V Connection

This machine is equipped with a power cord that has an equipment-grounding wire and NEMA 6-20 grounding plug. The plug must only be inserted into a matching receptacle (see **Figure**) that is properly installed and grounded in accordance with local codes and ordinances.

#### **Extension Cords**

We do not recommend using an extension cord with this machine. Extension cords cause voltage drop, which may damage electrical components and shorten motor life. Voltage drop increases with longer extension cords and smaller gauge sizes (higher gauge numbers indicate smaller sizes).

Any extension cord used with this machine must contain a ground wire, match the required plug and receptacle, and meet the following requirements:

## **AWARNING**

The machine must be properly set up before it is safe to operate. DO NOT connect this machine to the power source until instructed to do later in this manual.

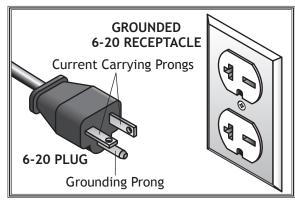


Figure 2. NEMA 6-20 plug & receptacle.



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



## **SETUP**

## Unpacking

This machine has been carefully packaged for safe transportation. If you notice the machine has been damaged during shipping, please contact your authorized Shop Fox dealer immediately.

## **Items Needed for Setup**

The following items are needed, but not included, to setup your machine.

Description	Qty
• Safety Glasses for Each Person	1
• Degreaser or Solvent for Cleaning	Varies
Disposable Rags for Cleaning	Varies
Straightedge	1
• Level	1
Dust Collection System	1
• 4" Dust Hose	
• 4" Hose Clamp	1
Assistant for Lifting	
Needle Nose Pliers	1
Wrench or Socket 17mm	
Wrenches or Sockets 13mm	
Wrench or Socket 10mm	
• Wrench 14mm	
Adjustable Wrench	



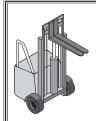
## **AWARNING**

This machine presents serious injury hazards to untrained users. Read through this entire manual to become familiar with the controls and operations before starting the machine!





Wear safety glasses during the entire setup process!



#### **AWARNING**

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



## Inventory

The following is a description of the main components shipped each W1819/W1820 model. Lay the components out to inventory them.

**Note:** If you can't find an item on this list, check the mounting location on the machine or examine the packaging materials carefully. Occasionally we pre-install certain components for shipping purposes.

Box	Contents: (Figures 3-5)	Qty
Α.	Main Table Saw Unit	1
В.	Extension Wings	2
C.	Dust Port	1
D.	Motor Door	1
E.	Blade Guard Assembly	1
F.	Riving Knife	1
G.	Miter Fence and Flip Stop	1
Н.	Wrench 27mm	
I.	Wrench 22/24mm	1
J.	Dado Table Insert	1
K.	Hex Wrench Set (Eight Pieces) 1.5-8mm	1
L.	Key 5 x 5 x 40	1
M.	Handwheel Lock Knob	1
N.	Handwheel Handle	1
0.	Handwheel	1
Ρ.	Push Stick	1
Q.	Saw Blade 10" x 40T	1
Har	dware (Not Shown)	Qty
•	Phillips Head Screw M6-1 x 12 (Magnetic Switch)	1
•	Hex Bolts M6-1 x 12 (Magnetic Switch)	2
•	Lock Washers 6mm (Magnetic Switch)	3
•	Flat Washers 6mm (Magnetic Switch)	3



Figure 3. Main table saw unit.

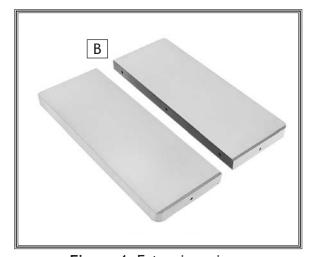


Figure 4. Extension wings.

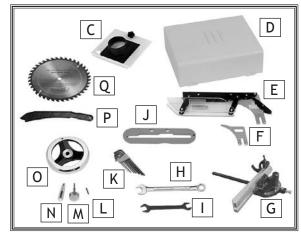
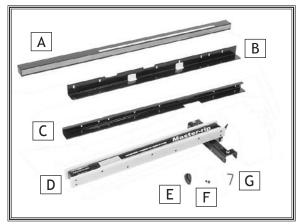


Figure 5. Component inventory.



## Fence Inventory W1819

Coı	mponents	Qty
A.	Front Rail Rectangular Tube 62"	1
В.	Front Rail 50"	
C.	Rear Rail 50"	
D.	Fence Assembly	1
E.	Fence Handle	
F.	Rear Rail Foot M12-1.75	
G.	Hex Wrench 6mm	
Н.	Extension Table 27" x 13 <sup>3</sup> / <sub>4</sub> "	1
l.	Front Rail Tape Scale	1
Hai	rdware and Tools (Not Shown)	Qty
•	Cap Screws M6-1 x 16 (Front Rail/Tube)	3
•	Flat Washers 6mm (Front Rail/Tube)	3
•	Lock Washers (Front Rail/Tube)	3
•	Hex Bolts M8-1.25 x 40 (Front & Rear Rails)	6
•	Flat Washers 8mm (Front & Rear Rails)	14
•	Lock Washers 8mm (Front & Rear Rails)	
•	Hex Nuts M8-1.25 (Front & Rear Rails)	6
•	Hex Bolts <sup>5</sup> / <sub>16</sub> -18 x 1 (Rear Rail)	
•	Hex Bolts M8-1.25 x 40 (Extension Table)	4
•	Hex Nuts M8-1.25 (Extension Table)	4
•	Flat Washers 8mm (Extension Table)	8
	Lock Washers 8mm (Extension Table)	1



**Figure 6.** Inventory needed to install the fence on the Model W1819.

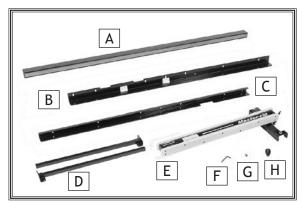


Figure 7. W1819 extension table.



## Fence Inventory W1820

Cor	nponents	Qty
A.	Front Rail Rectangular Tube 82"	
В.	Front Rail 70"	
C.	Rear Rail 70"	1
D.	Legs	2
E.	Fence Assembly	1
F.	Hex Wrench 6mm	
G.	Rear Rail Foot	
Н.	Fence Handle	
l.	Extension Table	
J.	Front Rail Tape Scale	1
Har	dware and Tools (Not Shown)	Qty
•	Cap Screws M6-1 x 16 (Front Rail/Tube)	
•	Flat Washers 6mm (Front Rail/Tube)	
•		
•	Lock Washers (Front Rail/Tube)	
•	Hex Bolts M8-1.25 x 40 (Front & Rear Rails).	6
•	Hex Bolts M8-1.25 x 40 (Front & Rear Rails). Flat Washers 8mm (Front & Rear Rails)	6 14
•	Hex Bolts M8-1.25 x 40 (Front & Rear Rails). Flat Washers 8mm (Front & Rear Rails) Lock Washers 8mm (Front & Rear Rails)	6 14 8
•	Hex Bolts M8-1.25 x 40 (Front & Rear Rails). Flat Washers 8mm (Front & Rear Rails) Lock Washers 8mm (Front & Rear Rails) Hex Nuts M8-1.25 (Front & Rear Rails)	6 14 8
•	Hex Bolts M8-1.25 x 40 (Front & Rear Rails). Flat Washers 8mm (Front & Rear Rails) Lock Washers 8mm (Front & Rear Rails)	6 14 8
•	Hex Bolts M8-1.25 x 40 (Front & Rear Rails). Flat Washers 8mm (Front & Rear Rails) Lock Washers 8mm (Front & Rear Rails) Hex Nuts M8-1.25 (Front & Rear Rails)	6 8 6
•	Hex Bolts M8-1.25 x 40 (Front & Rear Rails). Flat Washers 8mm (Front & Rear Rails) Lock Washers 8mm (Front & Rear Rails) Hex Nuts M8-1.25 (Front & Rear Rails) Hex Bolts $\frac{5}{16}$ -18 x 1 (Rear Rail)	6866
•	Hex Bolts M8-1.25 x 40 (Front & Rear Rails)  Flat Washers 8mm (Front & Rear Rails)  Lock Washers 8mm (Front & Rear Rails)  Hex Nuts M8-1.25 (Front & Rear Rails)  Hex Bolts <sup>5</sup> / <sub>16</sub> -18 x 1 (Rear Rail)  Hex Bolts M8-1.25 x 40 (Extension Table)  Hex Nuts M8-1.25 (Extension Table)  Flat Washers 8mm (Extension Table)	6 6 6 6 6
•	Hex Bolts M8-1.25 x 40 (Front & Rear Rails). Flat Washers 8mm (Front & Rear Rails) Lock Washers 8mm (Front & Rear Rails) Hex Nuts M8-1.25 (Front & Rear Rails) Hex Bolts $\frac{5}{16}$ -18 x 1 (Rear Rail) Hex Bolts M8-1.25 x 40 (Extension Table) Hex Nuts M8-1.25 (Extension Table)	6 6 6 6 6
•	Hex Bolts M8-1.25 x 40 (Front & Rear Rails)  Flat Washers 8mm (Front & Rear Rails)  Lock Washers 8mm (Front & Rear Rails)  Hex Nuts M8-1.25 (Front & Rear Rails)  Hex Bolts <sup>5</sup> / <sub>16</sub> -18 x 1 (Rear Rail)  Hex Bolts M8-1.25 x 40 (Extension Table)  Hex Nuts M8-1.25 (Extension Table)  Flat Washers 8mm (Extension Table)	6 6 6 6 6



**Figure 8.** Inventory needed to install the fence on the Model W1820.

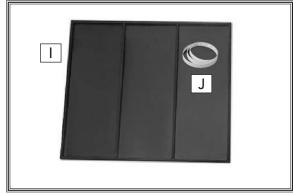
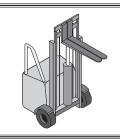


Figure 9. W1820 extension table.



## Machine Placement

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



## WARNING

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



## **A**CAUTION

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

## Cleaning Machine

The unpainted surfaces of your machine are coated with a heavy-duty rust preventative that prevents corrosion during shipment and storage. This rust preventative works extremely well, but it will take a little time to clean.

Be patient and do a thorough job cleaning your machine. The time you spend doing this now will give you a better appreciation for the proper care of your machine's unpainted surfaces.

There are many ways to remove this rust preventative, but the following steps work well in a wide variety of situations. Always follow the manufacturer's instructions with any cleaning product you use and make sure you work in a well-ventilated area to minimize exposure to toxic fumes.

#### Before cleaning, gather the following:

- Disposable rags
- Cleaner/degreaser (WD•40 works well)
- Safety glasses & disposable gloves
- Plastic paint scraper (optional)

#### Basic steps for removing rust preventative:

- 1. Put on safety glasses.
- 2. Coat the rust preventative with a liberal amount of cleaner/degreaser, then let it soak for 5-10 minutes.
- Wipe off the surfaces. If your cleaner/ degreaser is effective, the rust preventative will wipe off easily. If you have a plastic paint scraper, scrape off as much as you can first, then wipe off the rest with the rag.
- 4. Repeat Steps 2-3 as necessary until clean, then coat all unpainted surfaces with a quality metal protectant to prevent rust.

#### NOTICE

Avoid chlorine-based solvents, such as acetone or brake parts cleaner, that may damage painted surfaces.

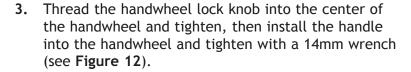


## **Assembly**

Assembly steps are the same for the Model W1819 and W1820 except where noted. Assembly consists of installing minor components, the extension wings, front and rear rails, extension table, and the legs (Model W1820 only).

#### To assemble the table saw, do these steps:

- 1. Pull the magnetic switch out of the saw cabinet and install the door by inserting the door pins into the hinge sockets on the cabinet (see Figure 10).
- 2. Place the included 5 x 5 x 40 key in the handwheel shaft and slide the handwheel onto the shaft on the front of the table saw. Use the included 2.5mm hex wrench to tighten the set screw (see Figure 11) on the side of the handwheel until it is secure.



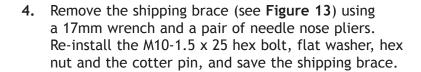




Figure 10. Door installed.

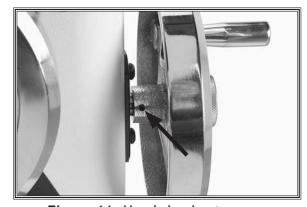


Figure 11. Handwheel set screw.

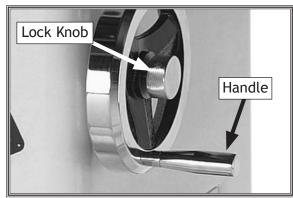


Figure 12. Handwheel installed.



Figure 13. Shipping brace location.



- 5. Insert the lip of the lower part of the dust port into the cabinet and tighten the thumb knob to secure (see Figure 14).
- 6. Remove the M8-1.25 x 30 cap screws, 8mm flat washers, and 8mm lock washers from the ends of the main table.
- 7. Inspect the extension wings and main table mating surfaces for burrs or foreign materials that may inhibit assembly.

The mating edges of the wings and the table must be clean, smooth, and flat. Use a wire brush or file if necessary to clean up the edges. This step will ensure that the wings mount properly to the main table.

- 8. While a helper holds the wings in place, attach each extension wing to the main table with the four M8-1.25 x 30 cap screws, 8mm lock washers, and 8mm flat washers removed in **Step 6** (see **Figure 15**).
- **9.** Place the straightedge across the extension wings and main table to make sure that the combined table surface is flush and flat.
  - If the combined table surface is flat, skip to the next step.
  - If the outside end of the extension wing tilts down, use a strip of masking tape along the bottom edge of the main table to shim the extension wing up (Figure 16).
  - If the outside end of the extension wing tilts up, use a strip of masking tape along the top edge of the main table to shim the extension wing down (Figure 17).

**Note:** After re-installing wings, remove all excess masking tape with a razor blade.

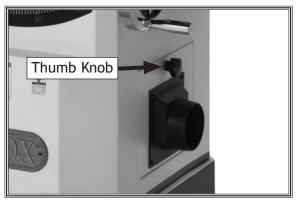


Figure 14. Dust port installed.

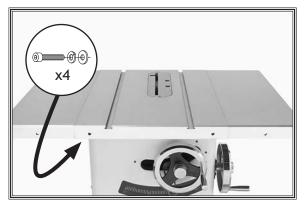


Figure 15. Extension wings installed.

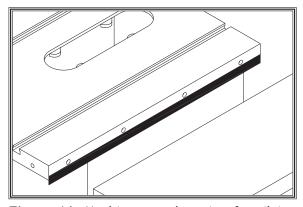


Figure 16. Masking tape location for tilting the extension wing up.

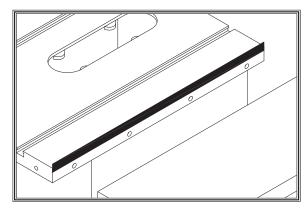


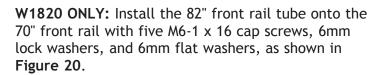
Figure 17. Masking tape location for adjusting the extension wing down.

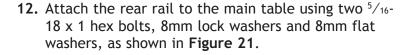


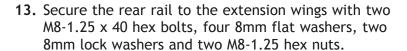
10. Install the front rail onto the table and extension wings with four M8-1.25 x 40 hex bolts, eight 8mm flat washers, four 8mm lock washers, and four M8-1.25 hex nuts, as shown in Figure 18.

Before final tightening, make sure the front rail is set  $\frac{3}{16}$ " below the beveled edge along the entire length of the table.

11. W1819 ONLY: Install the 62" front rail tube onto the 50" front rail with the three M6-1 x 16 cap screws, 6mm flat washers, and 6mm lock washers, as shown in Figure 19.







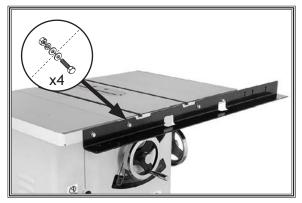
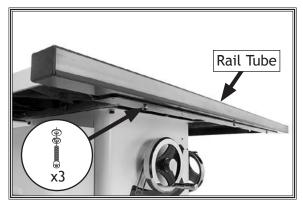
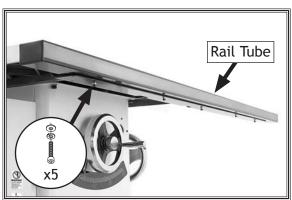


Figure 18. Front rail installed (W1819).



**Figure 19.** Model W1819 tube attached to front rail.



**Figure 20.** Model W1820 tube attached to front rail.

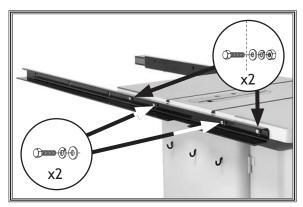
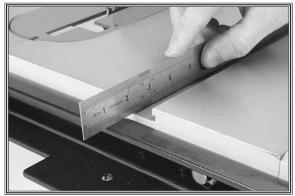


Figure 21. Rear rail installed (W1820).



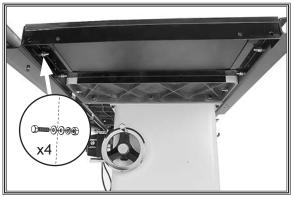
**Note:** Before tightening the fasteners, check to make sure the top edge of the rear rail is flush with the lowest edge of both T-slots (see **Figure 22**), so the miter gauge will slide smoothly when installed later.



**Figure 22.** Verifying rear rail is flush with bottom of T-slot.

#### W1819 Extension Table

1. Install the extension table between the front and rear rails with the four M8-1.25 x 40 hex bolts, eight 8mm flat washers, four 8mm lock washers, and four M8-1.25 hex nuts (see Figure 23).

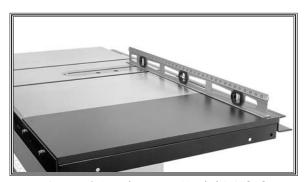


**Figure 23**. Model W1819 extension table installed.

2. Using a long straightedge, adjust the extension table so it is flat (both flush and parallel) with the main table and extension wings (see Figure 24), then tighten the fasteners.

#### W1820 Extension Table

- 1. Remove the six M6-1 x 16 hex bolts, (12) 6mm flat washers, six 6mm lock washers, and six M6-1 hex nuts from the extension table.
- 2. While an assistant holds the extension table between the front and rear rails, fasten the extension table to the rails with the fasteners removed in **Step 1**.
- 3. Thread the feet into the legs with the two M8-1.25 x 60 hex bolts, place the legs under the table, and thread the feet out until the top of each leg is against the underside corner of the table.
- **4.** Use the four M8-1.25 x 20 cap screws, 8mm lock washers, 8mm flat washers, and M8-1.25 hex nuts to secure the legs to the end of the extension table, as shown in **Figure 25**.



**Figure 24.** Adjusting Model W1819 extension table flush with wing and table.

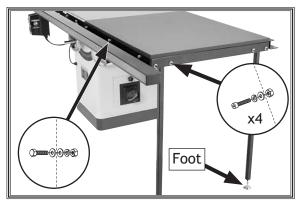


Figure 25. Model W1820 extension table installed.



- Adjust the extension table so it is flat (both flush and parallel) with the main table, using a long straightedge (similar to the method shown in Figure 24). This can be done by loosening the mounting bolts and adjusting the feet up/down as needed.
- **6.** Tighten the extension table mounting bolts, and tighten the hex nuts on the feet up against the legs so they will not move.

#### Fence & Miter Gauge

- 1. Attach the fence handle to the fence and thread the rear rail foot into the bottom of the fence (see Figure 26).
- 2. Place the fence on the rails on the right hand side of the blade (see Figure 27).

**Note:** Make sure the cam foot contacts the cam on the fence lock handle before you place the fence on the rail, otherwise the fence will not lock onto the rail tube.

3. Slide the miter gauge into the T-slot on the left hand side of the blade.

#### Magnetic Switch

- 1. Install the magnetic switch onto the bottom left hand side of the front rail using two M6-1 x 12 hex bolts, 6mm lock washers, and 6mm flat washers, as shown in **Figure 28**.
- 2. Secure the top of the switch to the rail with an M6-1 x 12 Phillip head screw, 6mm lock washer, and flat washer.

#### Saw Blade

- 1. Remove the table insert by unscrewing the screw that fastens it to the table.
- 2. Raise the arbor all the way up and set the blade angle at  $0^{\circ}$ .
- 3. Remove the arbor nut and arbor flange from the arbor, slide on the included 10" saw blade, making sure the teeth face the front of the saw, then install the arbor flange and arbor nut onto the blade. See Page 35 for additional details.

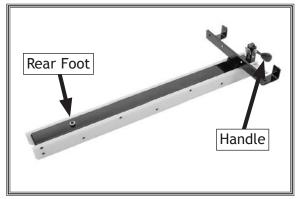


Figure 26. Fence assembled.

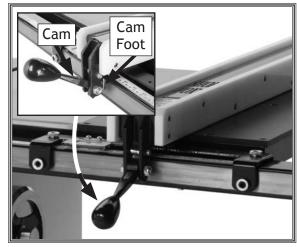


Figure 27. Fence installed on rails.

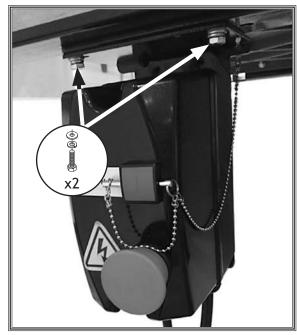


Figure 28. Magnetic switch installed.



4. Put on a pair of heavy leather gloves and use the included arbor wrenches to tighten the arbor nut (turn clockwise to tighten), as shown in **Figure 29**.

#### **Checking Fence Parallelism**

- 1. Slide the fence along the rail. If it drags across the table, then adjust the foot at the rear of the fence with a 6mm hex wrench to raise the fence off of the table, just enough so that the gap between the fence and the table is even from front to back.
- 2. Slide the fence up against the right hand edge of the miter slot, and lock it in place. Examine how the fence lines up with the miter slot (see Figure 30).

Note: It is permissible for the back of the fence to pivot outward not more than 1/64" from being parallel to the blade. This creates a slightly larger opening between the fence and the rear of the blade to reduce the risk of workpiece binding or burning as it is fed through the cut. Many woodworkers intentionally set up their fence in this manner. Keep this in mind before adjusting your fence. For more details see Figure 109 on Page 71.

- If the fence/miter slot are still parallel with the blade, proceed to Step Fence Scale.
- If the fence is not parallel to the blade/miter slot, then you MUST adjust the fence, as described in Fence Adjustments on Page 70, so that it is parallel to the blade.
- If the miter slot is not parallel with the blade, you must follow the procedures described in Miter Slot to Blade Parallelism on Page 67.

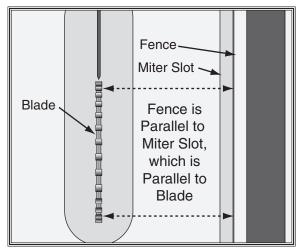
#### Fence Scale

Since the adhesive fence scale will be difficult to remove once it installed, determine whether you will use the pointer window on the right or the left side of the fence before installing the scale.

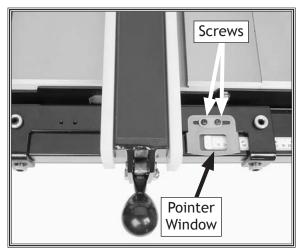
The pointer window may come pre-installed on the left side of the fence. However, we recommend loosening the mounting screws on the window and re-installing it on the right side of the fence (see Figure 31) so workpieces will not cover the pointer window when preparing to cut.



Figure 29. Securing blade.



**Figure 30.** Checking fence parallelism with blade.



**Figure 31.** Aligning rail tape with scale pointer.



On the Model W1819, if you move the pointer window to the right side of the fence, you may have to trim the last two inches of the scale so it will not protrude past the end of the fence tube.

One option for using the pointer window on the left side of the fence is to use it in conjunction with a small, leftreading scale (not included).

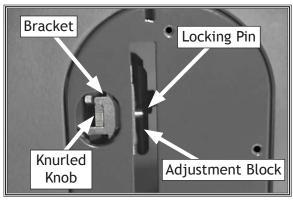
#### To install the fence scale, do these steps:

- 1. Slide the fence up against the saw blade and lock it in place.
- Place the front rail tape scale on the fence tube, making sure it is parallel with the tube and that the "0" end is directly under the red line on the pointer window, as shown in Figure 31.
- 3. Lightly mark the "0" location on the fence tube with a pencil, then remove the fence.
- 4. Peel the tape and carefully align the "0" mark on the scale with the pencil mark you made on the fence tube.
  - If you make a mistake, loosen the screws on the pointer window, slide the fence against the blade, adjust the pointer window so the red line on the window is over the 0" mark on the tape, then secure the screws.

#### **Blade Guard**

- 1. Re-install the table insert, slide the knurled knob out (see Figure 32) and rotate it forward so it engages the upper bracket.
- 2. Slide the blade guard spreader all the way down into the adjustment block, then rotate the knurled knob so it disengages the bracket and the locking pin engages the hole in the center of the spreader.
- **3.** Give the spreader an upward tug to verify that it is locked.

The blade guard, when properly installed, should look like **Figure 33**, and should pivot freely so it touches the table surface in the down position. It should also swing up high enough to accommodate the workpiece.



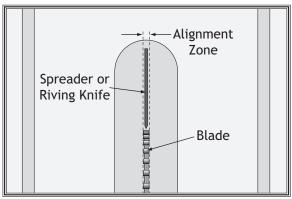
**Figure 32.** Knurled knob used to secure spreader.



Figure 33. Blade guard installed.



- 4. Adjust the set screws to make sure the table insert is flush with the table (use a straightedge as a guide), then tighten the button head screw to secure the table insert in place.
- 5. Place a straightedge against the blade and the spreader. When properly aligned, the spreader/riving knife will be parallel with the blade and in the "Alignment Zone," shown in Figure 34.
  - If the spreader/riving knife is not inside the alignment zone and not parallel with the blade, then it needs to be adjusted. Proceed to "Adjusting Alignment" on Page 69.
  - If the spreader/riving knife is not parallel with the blade, it may be bent. Proceed to "Checking Alignment" on Page 68 to determine if the spreader/riving knife is bent.



**Figure 34.** Spreader/riving knife alignment zone.

#### **Dust Collection**

Components and Hardware Needed:	Qty
Dust Hose 4" (not included)	1
Hose Clamps 4" (not included)	2
Dust Collection System (not included)	1

#### Recommended CFM at Dust Port: 400 CFM

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

#### To connect a dust collection hose, do these steps:

- 1. Fit a 4" dust hose over the dust port, as shown in Figure 35, and tightly secure in place with a hose clamp.
- 2. Tug the hose to make sure it does not come off. Note: A tight fit is necessary for proper performance.

## **A**CAUTION

DO NOT operate the Model W1819 or W1820 without an adequate dust collection system. This saw creates substantial amounts of wood dust while operating. Failure to use a dust collection system can result in short and long-term respiratory illness.



**Figure 35.** Dust hose attached to dust port.



#### Test Run

Once the assembly is complete, test run the machine to make sure it runs properly for regular operations. The test run consists of verifying the following: 1) The motor powers up and runs correctly, and 2) the safety disabling mechanism on the switch works correctly.

If, during the test run, you cannot easily locate the source of an unusual noise or vibration, stop using the machine immediately, then review **Troubleshooting** on **Page 77**. If you still cannot remedy a problem, contact our Tech Support at (360) 734-3482 for assistance.

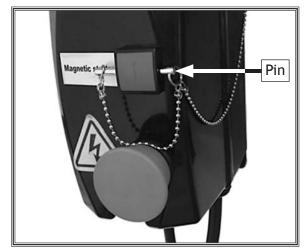
#### To test run the machine, do these steps:

- 1. Make sure you have read the safety instructions at the beginning of the manual and that the machine is fully assembled and set up properly.
- 2. Make sure all tools and objects used during setup are cleared away from the machine.
- 3. Connect the machine to the power source.
- **4.** Verify that the machine is operating correctly by turning the machine *ON*.
  - When operating correctly, the machine runs smoothly with little or no vibration or rubbing noises.
  - Investigate and correct strange or unusual noises or vibrations before operating the machine further.
     Always disconnect the machine from power when investigating or correcting potential problems.
- 5. Turn the machine **OFF**.
- **6.** Insert the switch disabling pin through the green ON button, as shown in **Figure 36**.
- **7.** Press the green ON button to test the disabling feature on the switch.
  - If the machine does not start, the switch disabling feature is working as designed.
  - If the machine starts, immediately stop the machine. The switch disabling feature is not working correctly. This safety feature must work properly before proceeding with regular operations. Call Tech Support for help.

## **AWARNING**



Projectiles thrown from the machine could cause serious eye injury. Wear safety glasses to reduce the risk of injury.



**Figure 36.** Switch disabling pin inserted into ON button.



## **OPERATIONS**

#### General

This machine 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 are experiencing difficulties performing any operation, stop using the machine!

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

# AWARNING

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

#### **Basic Controls**

ON Button: Starts the motor (see Figure 37).

**Safety Pin & Chain:** When installed, disables the ON Button, preventing accidental startup (see **Figure 37**).

Emergency Stop/Reset Button: Turns machine *OFF*. Rotate clockwise to reset (see Figure 37).

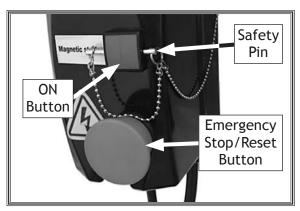


Figure 37. ON/OFF switch disabled.

**Blade Tilt:** To adjust the blade tilt, loosen the blade tilt lock, turn the blade tilt handwheel to position the blade at the desired angle, then tighten the lock shown in **Figure 38**.

**Blade Height:** To set the blade height, unlock the blade height lock, turn the handwheel to set the blade height approximately <sup>1</sup>/<sub>4</sub>" higher than the workpiece, then re-tighten the blade height lock.

**Fence Lock:** After adjusting the fence to the desired width of cut, lock it in place by firmly pushing the fence lock down until it stops.

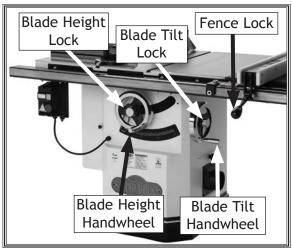


Figure 38. Basic table saw controls.



# Non-Through & Through Cuts

#### 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, as shown in **Figure 39**.

Examples of non-through cuts include dadoes and rabbets. Non-through cuts have a higher risk of injury from kickback because the spreader and blade guard must be removed. When making non-through cuts with a standard blade, the riving knife MUST be installed. When making non-through cuts with a dado blade, extreme care, including using multiple light passes must be used, because the blade guard cannot be used.

The following non-through cuts are described in this manual on the pages noted below:

Dado Cutting: Page 44
Rabbet Cutting: Page 47
Resawing: Page 49

#### **Through Cuts**

A through cut is a sawing operation in which the workpiece is completely sawn through, as shown in **Figure 40**. Examples of through cuts are rip cuts, cross cuts, miter cuts, and beveled cuts. The blade guard assembly MUST be used when performing through cuts.

The following through cuts are described in this manual on the pages noted below:

Ripping: Page 40Crosscutting: Page 41Miter Cuts: Page 42

Blade Tilt & Bevel Cuts: Page 43

## **AWARNING**

Damage to your eyes, lungs, and ears could result from using this machine without proper protective gear. Always wear safety glasses, a respirator, and hearing protection during operation.



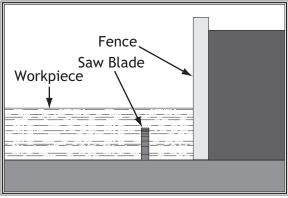
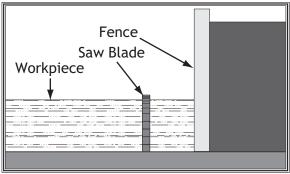


Figure 39. Example of a non-through cut.



**Figure 40.** Example of a through cut (blade guard not shown for illustrative clarity).



#### **Blade Selection**

#### Ripping blade features (see Figure 41):

- Best for cutting with the grain of the workpiece.
- 20-40 teeth.
- Flat-top ground tooth profile.
- Large gullets for large chip removal.

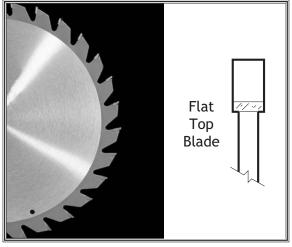


Figure 41. Ripping blade.

#### Crosscut blade features (see Figure 42):

- Best for cutting across the grain of the workpiece.
- 60-80 teeth.
- Alternate top bevel tooth profile.
- Small hook angle and a shallow gullet.

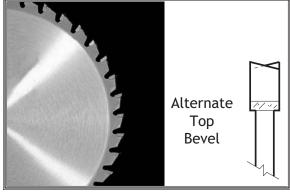


Figure 42. Crosscutting blade.

#### Combination blade features (see Figure 43):

- Adequate for cutting both with and across the grain.
- 40-50 teeth.
- Alternate top bevel and flat, or alternate top bevel and raker tooth profile.
- Teeth are arranged in groups of five.
- Gullets are small and shallow within the groups of five teeth, similar to a cross-cut blade; then large and deep between each group of five, like a ripping blade.

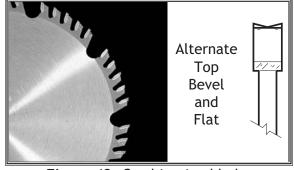


Figure 43. Combination blade.

#### Laminate blade features (see Figure 44):

- Best for cutting plywood or veneer.
- 40-80 teeth.
- Triple chip tooth profile.
- Very shallow gullet.

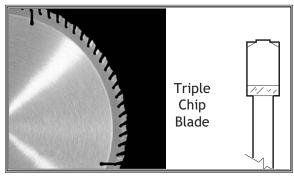


Figure 44. Laminate blade.



#### Dado Blades (see Figure 45):

There are two types of dado blades: stacked and wobble.

- Stacked Dado Blade: These dedicated dado cutting blade sets consist of up to 8 individual blades. Multiple cutters are "stacked" between two outside blades. The width of the dado is determined by the combination of cutters that are "stacked" together. The dado is cut in a single pass leaving a smooth and square channel in the face of the workpiece. Stacked dado blades are the most expensive option, but are worth considering if your projects require a lot of visible dado cuts. A stacked dado blade is shown in Figure 45.
- Wobble Dado Blade: Also a dedicated dado blade, a wobble blade usually consists of a single blade that is tilted on the arbor shaft while it is spinning. The channel is cut in the face of the workpiece as the blade passes through its pre-adjusted width of travel. Wobble blades are an inexpensive option when visibly pleasing channels are not a concern.

#### Thin Kerf Blade

A blade with a kerf or thickness that is thinner than a standard blade. Since thin kerf blades are typically the same thickness of the spreader or riving knife—and in some cases thinner—we DO NOT recommend that they be used on this saw due to the increased risk of kickback. The acceptable kerf range is 0.102"- 0.126" (2.6mm-3.2mm).

**Note:** This section on blade selection is by no means comprehensive. Always follow the saw blade manufacturer's recommendations to ensure safe and efficient operation of your table saw.



Figure 45. Stacked dado blade.



# **Blade Installation**

# **A**CAUTION

The saw blade is sharp. Use extra care or wear gloves when handling the blade or working near it.

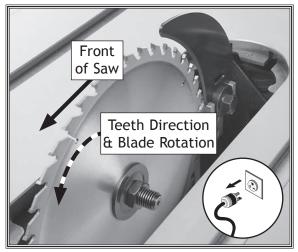
Review this section, even if your saw blade came preinstalled.

### To install the blade, do these steps:

- 1. DISCONNECT THE SAW FROM POWER!
- 2. Put on heavy leather gloves and raise the arbor all the way up.
- 3. Remove the table insert and blade guard/riving knife, depending on what is installed.
- **4.** Use the arbor wrenches to loosen and remove the arbor nut, flange, and blade.

**Note:** The arbor nut has right hand threads; turn it counterclockwise to loosen.

- 5. Slide the blade over the arbor with the teeth facing the front of the saw, as shown in Figure 46.
- **6.** Re-install the arbor flange and the arbor nut (see **Figure 47**), and tighten them against the blade with the wrenches included with the saw. DO NOT overtighten.



**Figure 46.** Example of correct blade direction.

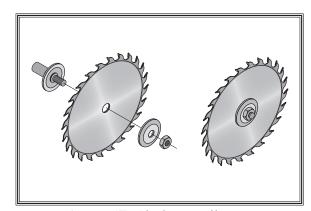


Figure 47. Blade installation.



# **Blade Guard Assembly**

The term "blade guard" refers to the assembly that consists of the clear polycarbonate shield, the spreader, and the anti-kickback pawls on each side of the spreader (Figure 48). Each of these components have important safety functions during the operation of the saw.

### Guard

The clear polycarbonate guard allows the operator to see the blade cut the workpiece during operation. This guard is designed to lift as the workpiece is pushed into the blade and remain in contact with the workpiece throughout the entire cut.

The guard reduces injury risk by providing a barrier around the blade that prevents accidental contact and contains flying wood chips.

To ensure that the guard does its job effectively, it must always be in the downward position against the table in the resting position during idle operation, and the hinge mechanism must be maintained in good working condition so the guard can freely pivot up and down to accommodate the height of the workpiece and return to the table surface.

### Spreader

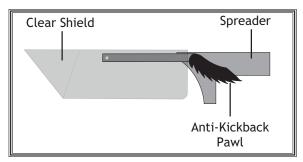
The spreader is a metal plate that prevents the newly cut kerf of the workpiece from pinching the backside of the blade, causing kickback. The spreader also acts as a barrier behind the blade to shield hands from being pulled into the blade if a kickback occurs.

# **A**CAUTION

To ensure that the blade spreader works safely, the following requirements MUST be met when installing new blades:

- Blade Diameter: 10"
- Spreader Thickness: 0.1" (2.5mm)
- Required Blade Body Thickness (excluding teeth): 0.071-0.094" (1.8-2.4mm)
- Required Blade Kerf Thickness: 0.102"- 0.126" (2.6mm-3.2mm)

The spreader MUST be aligned/adjusted to the blade. These requirements are not applicable to dado blades.



**Figure 48.** Blade guard assembly components.

# WARNING

In order to work properly, the spreader cannot be bent or misaligned with the blade. If the spreader gets accidentally bent, take the time to straighten it or just replace it. Using a bent or misaligned spreader will increase the risk of kickback!



### **Anti-Kickback Pawls**

The anti-kickback pawls allow the workpiece to travel in only one direction. If the workpiece moves backwards, such as during a kickback, the pawls will dig into the workpiece to slow or stop it.

To work properly, the pawls must return to their bottommost position after pivoting, as shown in **Figure 49**, and they must not be engaged in the arresting hooks. If the pawls fail to return to the bottom position, the pivot spring may have been dislodged or broken and will need to be fixed/replaced.

### **Disabling Pawls**

To disable the pawls, rotate the arresting hooks downward, then place the pawls on each of the hooks, as shown in **Figure 50**.

Use your best judgment before retracting the pawls, as they are provided for your safety. Certain situations could warrant retracting the pawls. For example, you might retract the pawls if you are concerned about them scratching a delicate workpiece, or if you believe that they will obstruct a narrow workpiece and cause feeding difficulty or loss of control.

### **Enabling Pawls**

To enable the pawls, lift up on each pawl and move them outward and down until they both touch the table surface, as shown in **Figure 49**.

### When to Use the Blade Guard

The blade guard assembly MUST always be installed on the saw for all normal through cuts (those where the blade cuts all the way through the thickness of the workpiece).

### When Not to Use the Blade Guard

The blade guard cannot be used on any non-through cuts (those in which the blade does not cut all the way through the thickness of the workpiece).

Sometimes the blade guard or its components can get in the way when cutting very narrow workpieces or other specialized cuts. Because the blade guard is provided to decrease your risk of injury, it should not be used if it gets in the way of making a safe cut. Use good judgment!

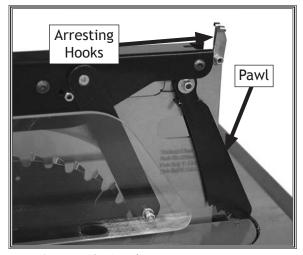


Figure 49. Pawls in return position.

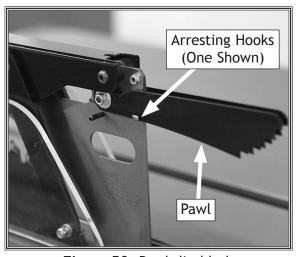


Figure 50. Pawl disabled.

# **AWARNING**

We do not recommend disabling the pawls during normal operations unless absolutely necessary. In most situations, disabling the pawls will increase your risk of serious personal injury in the event of a kickback.

# **NOTICE**

Whenever the blade guard cannot be used, the riving knife must be installed.



# **Riving Knife**

The riving knife works in the same manner as the spreader on the blade guard assembly. It is a metal plate that prevents the newly cut workpiece from pinching the backside of the blade and causing kickback.

The key difference between the spreader and the riving knife is that the riving knife mounts below the blade's highest point of rotation, as shown in **Figure 51**.

The height difference between the riving knife and the blade allows the workpiece to pass over the blade during non-through cuts (those in which the blade does not cut all the way through the thickness of the workpiece).

The riving knife acts as a barrier behind the blade to reduce the risk of hands being pulled into the blade if a kickback occurs. The riving knife must be kept within the range shown in **Figure 52**. For that reason, we only recommend using a 10" blade for operations that require use of the riving knife.

### How to Install the Riving Knife

The riving knife is installed in a similar manner to the blade guard and spreader. Refer to Blade Guard on Page 36 for installation instructions.

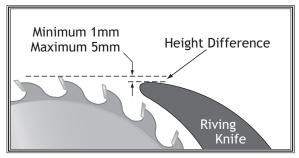
### When to Use the Riving Knife

Use the riving knife for all non-through cuts made with a standard table saw blade (i.e., dadoes or rabbet cuts in which a dado blade is NOT used, and when using a tenoning jig). Also, use the riving knife for those special operations where the blade guard or its components get in the way of safe operation, such as with very narrow cuts.

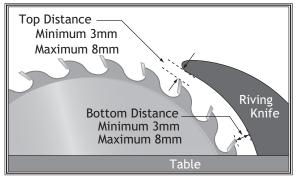
### When Not to Use the Riving Knife

The riving knife CANNOT be used with a dado blade that has a diameter smaller than 10." Otherwise, the riving knife height will exceed the blade height and the workpiece will hit the riving knife during the cut, forcing the operator into a dangerous situation of trying to turn the saw off with the workpiece stuck halfway through the cut.

In addition, although it is possible to use the riving knife for through cutting operations, the blade guard assembly offers far more injury protection and risk reduction than the riving knife. Therefore, we strongly recommend that you use the blade guard assembly instead of the riving knife for through cuts.



**Figure 51.** Height difference between riving knife and blade.



**Figure 52.** Allowable top and bottom distances between riving knife and blade.

# **AWARNING**

In order to work properly, the riving knife cannot be bent or misaligned with the blade. If the riving knife gets accidentally bent, take the time to straighten it or just replace it. Using a bent or misaligned riving knife will increase the risk of kickback!

# **A**CAUTION

To ensure riving knife works safely, the following requirements MUST be met when installing new blades:

- Blade Diameter: 10"
- Riving Knife Thickness: 0.1" (2.5mm)
- Required Blade Body Thickness (excluding teeth): 0.071-0.094" (1.8-2.4mm)
- Required Blade Kerf Thickness: 0.102"- 0.126" (2.6mm-3.2mm)
   Riving knife MUST be aligned to blade; These Requirements do not apply to dado blades.



# **Workpiece Inspection**

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

Before cutting, get in the habit of inspecting all workpieces for the following:

- Material Type: This machine is intended for cutting natural and man-made wood products, laminate covered wood products, and some plastics. Cutting drywall or cementious backer board creates extremely fine dust and may reduce the life of the bearings. This machine is NOT designed to cut metal, glass, stone, tile, etc.; cutting these materials with a table saw may lead to injury.
- Foreign Objects: Nails, staples, dirt, rocks and other foreign objects are often embedded in wood. While cutting, these objects can become dislodged and hit the operator, cause kickback, or break the blade, which might then fly apart. Always visually inspect your workpiece for these items. If they can't be removed, DO NOT cut the workpiece.

- Large/Loose Knots: Loose knots can become dislodged during the cutting operation. Large knots can cause kickback and machine damage. Choose workpieces that do not have large/loose knots or plan ahead to avoid cutting through them.
- Wet or "Green" Stock: Cutting wood with a moisture content over 20% causes unnecessary wear on the blades, increases the risk of kickback, yields poor results.
- Excessive Warping: Workpieces with excessive cupping, bowing, or twisting are dangerous to cut because they are unstable and often unpredictable when being cut. DO NOT use workpieces with these characteristics!
- Minor Warping: Workpieces with slight cupping can be safely supported if the cupped side is facing the table or the fence.



# Ripping

"Ripping" means cutting with the grain of a natural wood workpiece. In other man-made 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 13 and take the necessary precautions to prevent kickback.
- **2.** If using natural wood, joint one long edge of the workpiece on a jointer.
- DISCONNECT THE SAW FROM POWER!
- **4.** Ensure that the blade guard/spreader is installed.
- **5.** Set the fence to the desired width of cut on the scale.
- **6.** Adjust the blade height so the highest saw tooth protrudes approximately 1/4" above the workpiece.
- 7. Set up safety devices such as featherboards or other anti-kickback devices.
- **8.** Rotate the blade by hand to make sure it does not come into contact with any of the safety devices.
- **9.** Plug the saw into the power source, turn it *ON*, and allow it to reach full speed.

**Note:** The jointed edge of the workpiece must slide against the fence during the cutting operation.

**10.** Use a push stick to feed the workpiece through the saw blade, as shown in **Figure 53**, until the workpiece is completely past the saw blade.

# **AWARNING**

Turn OFF the saw and allow the blade to come to a complete stop before removing the cut-off piece. Failure to follow this warning could result in serious personal injury.

# **AWARNING**

Serious injury can be caused by kickback. Kickback is a high-speed expulsion of stock from the table saw 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 53. Typical ripping operation.

# **A**WARNING



Keep the blade guard installed and in the down position. Failure to do this could result in serious personal injury or death.



# Crosscutting

"Crosscutting" means cutting across the grain of a natural wood workpiece. In other man-made materials, such as MDF or plywood, crosscuttting means cutting across the width of the workpiece.

To make a crosscut using the miter gauge, do these steps:

- 1. DISCONNECT THE SAW FROM POWER!
- 2. Ensure that the blade guard/spreader is installed.
- 3. Move the rip fence aside and position the miter gauge, adjusted to 90°, in a miter slot.
- **4.** Adjust the blade height so the teeth protrude approximately <sup>1</sup>/<sub>4</sub>" above the workpiece.
- 5. Slide the miter gauge near the blade and adjust the workpiece so the blade will cut on the waste side of the line.
- **6.** Plug in the table saw, turn it *ON*, and allow it to reach full speed.
- 7. Hold the workpiece firmly against the face of the miter gauge (see Figure 54) and ease it through the blade until the workpiece is completely past the saw blade.

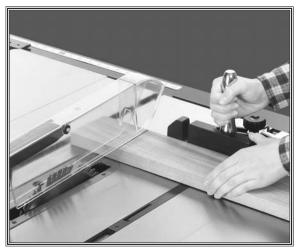


Figure 54. Typical crosscutting operation.

# **AWARNING**

Turn OFF the saw and allow the blade to come to a complete stop before removing the cut-off piece. Failure to follow this warning could result in serious personal injury.



Keep the blade guard installed and in the down position. Failure to do this could result in serious personal injury or death.



# **Miter Cuts**

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

### To perform a miter cut, do these steps:

- 1. DISCONNECT THE SAW FROM POWER!
- 2. Ensure that the blade guard/spreader is installed.
- 3. Determine the angle of your cut. If the angle needs to be very precise, use a protractor to set the miter gauge to the blade.
- 4. Place the face of the miter gauge against the edge of the workpiece and place the bar across the face of the workpiece. Use the bar as a guide to mark your cut, as shown in **Figure 55**.
- 5. Place the miter gauge back into the slot and hold the workpiece firm against the miter gauge body. Slide the miter gauge near the blade and adjust the workpiece so the blade will cut on the waste side of the line.
- Proceed to make the cut in the same manner as described in the Crosscutting instructions on Page 41.



Figure 55. Example of marking miter line.

# Miter Fence

The miter fence provides greater workpiece support than the miter gauge alone, especially for longer workpieces.

Simply loosen the lock levers shown in **Figure 56**, slide the miter fence in the needed direction for the cutting operation, then tighten the levers. Make sure the miter fence does not contact the blade guard or blade when moved through its full range of travel.

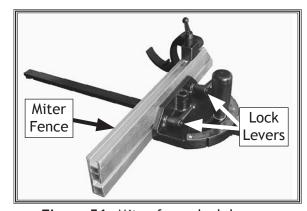


Figure 56. Miter fence lock levers.



# Flip Stop

The flip stop can be positioned anywhere along the top of the miter fence and secured in place with a lock lever (see **Figure 57**), the same distance away from the blade as your desired width of cut.

The flip stop can be used in the down position to make multiple cuts of the same width. It can be pivoted (hence the name "flip") out of the way to allow longer workpieces to be cut, then pivoted back down to make additional cuts at the specified cutting width.

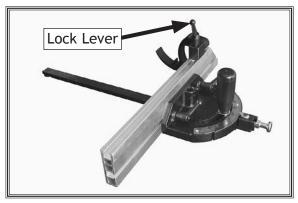
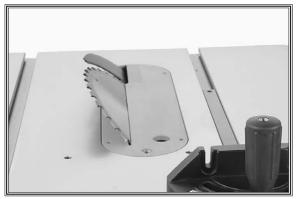


Figure 57. Flip stop lock lever.

# Blade Tilt & Bevel Cuts

When the blade tilt stop bolts are properly adjusted, as described on **Page 65**, the blade tilt handwheel allows the operator to tilt the blade to the left, anywhere between 0° and 45°. This is used most often when cutting bevels or compound miters. **Figure 58** shows an example of the blade when tilted to 45°.



**Figure 58.** Blade tilted to 45° for bevel cutting on a typical table saw.



# **Dado Cutting**

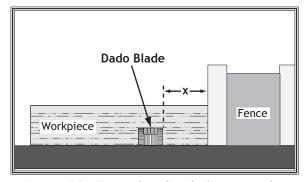
Commonly used in furniture joinery, a dado is a straight channel cut in the face of the workpiece. Dadoes can be cut using either a dedicated dado blade or a standard saw blade. Figure 59 shows a cutaway view of a dado cut being made with a dado blade.

The included dado table insert must be installed and used when a dado blade is installed—unless a zero clearance table insert is used instead.

The table saw motor is pushed to its limits when making a dado cut with a dado blade. If the motor starts to bog down, slow down your feed rate, reduce the depth of cut and make multiple shallow passes.

### Installing a Dado Blade

- 1. DISCONNECT THE SAW FROM POWER!
- 2. Remove the table insert, the blade guard assembly or riving knife, and the saw blade.
- **3.** Attach and adjust the dado blade system according to the dado blade manufacturer's instructions
- 4. Install the dado insert.



**Figure 59.** Example of a dado cut with a dado blade.

# **AWARNING**

Dado blades have a higher risk of kickback than normal blades because their large size applies stronger forces to the workpiece. This risk increases relative to the depth and width of the cut. To minimize your risk of serious personal injury, ensure that stock is flat and straight, and make multiple light cuts (rather than one deep cut) to achieve the desired cutting depth.

# 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.



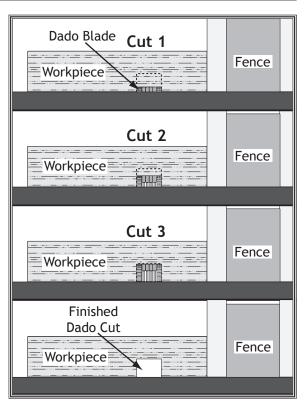
### Cutting Dadoes with a Dado Blade

Because dado blades are so much wider than standard blades, they place a much greater amount of force against the workpiece when cutting.

To avoid injury, dado cuts require a much slower feed rate than normal cuts, and they are best done with multiple light cuts that get progressively deeper until the desired depth of cut is achieved, as demonstrated in **Figure 60**.

### To cut a dado with a dado blade, do these steps:

- 1. Adjust the dado blade to the desired depth of cut.
- 2. Adjust the distance between the fence and the inside edge of the blade, as shown in Figure 59 on Page 44.
  - If dadoing across the 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.
- 3. Reconnect the saw to the power source.
- **4.** Turn the saw **ON**. The blade should run smooth, with no vibrations.
- **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 actual workpiece.



**Figure 60.** Example of dado being cut with multiple light cuts, instead of one deep cut.



### **Cutting Dadoes with a Standard Blade**

A ripping blade is typically the best blade to use for cutting dadoes when using a standard blade because it removes sawdust very efficiently. See Page 33 for blade details.

To use a standard saw blade to cut dadoes, do these steps:

- DISCONNECT THE SAW FROM POWER!
- 2. Ensure that the riving knife and standard table insert are installed and properly adjusted.
- 3. 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.
- **4.** Raise the blade up to the desired depth of cut (depth of dado channel desired).
  - 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.
  - If dadoing the length of a workpiece, align the blade to cut one of the dado sides as shown in Figure 61.
- **5.** Reconnect the saw to the power source and turn the saw *ON*. Allow the blade to reach full speed.
- **6.** Perform the cutting operation.
- Re-adjust the fence so the blade is aligned with the other edge of the intended dado channel (Figure 62).

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

**8.** Continue making cuts toward the center of the dado until the dado is complete (see **Figure 63**).

# **AWARNING**

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.

# CAUTION

Always use push sticks, featherboards, push paddles and other safety accessories whenever possible to increase safety and control during operations that require the blade guard and spreader to be removed from the saw. ALWAYS replace the blade guard after dadoing is complete.

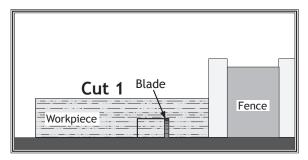


Figure 61. Single-blade dado first cut.

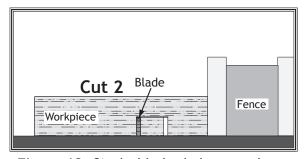


Figure 62. Single-blade dado second cut.

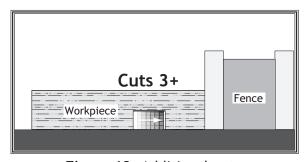


Figure 63. Additional cuts.



# Rabbet Cutting

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 as shown in **Figure 64**. Make the sacrificial fence the same length as the fence and  $^{3}/_{4}$ " thick. Attach it to the fence with screws or clamps, making sure they are all secure and tight. Raise the blade into the sacrificial fence to the height needed.

### **Cutting Rabbets with Dado Blade**

- 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 65**.

# **AWARNING**

Dado blades have a higher risk of kickback than normal blades because their larger size applies stronger force to the workpiece. This risk increases relative to the depth and width of the cut. To minimize your risk of serious personal injury, ensure that the stock is flat and straight, and make multiple light cuts (rather than one deep cut) to achieve the desired cutting depth.

- 4. Reconnect the saw to the power source and turn the saw *ON*. When the blade has reached full speed, perform a test cut with a scrap piece of wood.
  - If the cut is satisfactory, repeat the cut with the final workpiece.

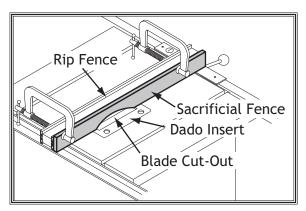


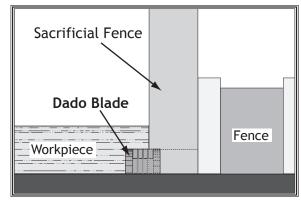
Figure 64. Sacrificial fence.



You may experience kickback during this procedure. Stand to the side of the blade and wear safety glasses or a face shield to prevent injury when cutting rabbets.

# **ACAUTION**

Always use push sticks, featherboards, push paddles and other safety accessories whenever possible to increase safety and control during operations which require that the blade guard and splitter must be removed from the saw. ALWAYS replace the blade guard after dadoing is complete.



**Figure 65.** Rabbet cutting with a dado blade



### **Cutting Rabbets with Standard Blade**

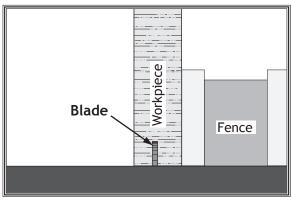
A ripping blade is typically the best blade to use for cutting rabbets when using a standard blade because it removes sawdust very efficiently (see Page 33 for blade details about ripping blades). Also, a sacrificial fence is not required when cutting rabbets with a standard blade.

### To cut a rabbet with a standard blade, do these steps:

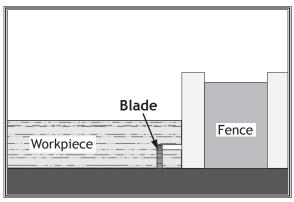
- DISCONNECT THE SAW FROM POWER!
- 2. Ensure that the riving knife and standard table insert are installed.
- 3. Mark the width of the rabbet cut on the edge of the workpiece, so you can clearly identify the intended cut.
- 4. Raise the blade up to the desired depth of cut (depth of rabbet channel desired). When cutting deep rabbets, take more than one pass to reduce the risk of kickback.
- Stand the workpiece on edge, as shown in Figure 66, then adjust the fence so the blade is aligned with the inside of your rabbet channel.
- **6.** Reconnect the saw to the power source and turn the saw *ON*. When the blade has reached full speed, perform a test cut with a scrap piece of wood.
  - If the cut is satisfactory, repeat the cut with the final workpiece.
- 7. Lay the workpiece flat on the table, adjust the saw blade height to intersect with the first cut, as shown in Figure 67, then perform the second cut to complete the rabbet.

# 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 66.** Rabbet cutting with a standard blade.



**Figure 67.** Rabbet cutting with a standard blade.



# Resawing

Resawing is the process of cutting a thick piece of stock into one or more thinner pieces. Although resawing can be done with a table saw, we strongly recommend that you use a bandsaw instead.

A bandsaw is the ideal machine for resawing, and resawing with one is fairly easy and safe. A table saw is not intended for resawing, and resawing with one is difficult and dangerous due to the increased risk of kickback from binding and deep cuts, and the increased risk of injury from having to remove the guard.

If you insist on resawing with a table saw, DO NOT do so without using a resaw barrier and wearing a full face shield. The following instructions describe how to build a resaw barrier and add an auxiliary fence to your standard fence, to reduce the risk injury from resawing on a table saw.

**Note:** This table saw can only resaw wood that is less than  $6^3/8$ " tall.

# **AWARNING**

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 table saw 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 kickback.

# **AWARNING**

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.



### Making Resaw Barrier

The resaw barrier acts in tandem with the rip fence when resawing to provide tall support for the workpiece to minimize the probability of it binding against the blade and causing kickback.

### Tools Needed for the Resaw Barrier:

Table Saw	
Jointer and Planer	
Clamps	2 Minimum
Drill and Drill Bits	
Components Needed for the Resaw B	arrier:

components necessarion the nesam barrier.
Wood* 3/4" x 6" x Length of Table Saw Fence1
Wood* <sup>3</sup> / <sub>4</sub> " x 3" x Length of Table Saw Fence1
Wood Screws #10 x 2"4
Wood Glue As Needed

<sup>\*</sup> Only use furniture grade plywood, kiln dried hardwood, or UHMH plastic to prevent warping.

### To build the resaw barrier, do these steps:

- 1. Cut your wood pieces to the size specified above. If you are using hardwood, cut the pieces oversize, then joint and plane them to the correct size to make sure they are square and flat.
- 2. Pre-drill and countersink 4 holes approximately <sup>3</sup>/<sub>8</sub>" from the bottom of the 6" tall board. These will be use as pilot holes when attaching the board to another piece in the next step.
- 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 68**, fasten together with the wood screws.

### **Auxiliary Fence**

The auxiliary fence is necessary if you are resawing a workpiece that is taller than it is wide. It should be no less than 1/2" shorter than the board to be resawn.

### Components Needed for the Auxiliary Fence:

Hardwood or Plywood 3/4" x (Height) x Length of Table
Saw Fence1

### Tools Needed for the Resaw Barrier:

Table Saw	1
Jointer and Planer	Recommended
Clamps	2 Minimum

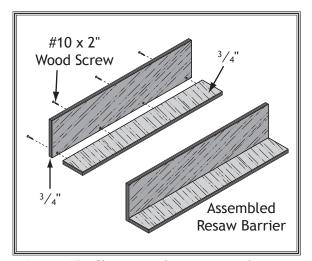


Figure 68. Clamping the resawing barrier.



### To build the auxiliary fence, do these steps:

1. Cut the auxiliary fence board to size. 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. Unthread the fence face mounting hardware and remove the fence face from the fence assembly.
- 3. Place the auxiliary fence next the fence face you removed in **Step 1**, mark the location of the nine mounting holes on the auxiliary fence, then drill the holes.
- 4. Use the mounting hardware that had previously attached the fence face to attach the auxiliary fence. The end result should be similar to Figure 69.

# Fence Body Facing Fence Fence

Figure 69. Auxiliary fence.

### **Resawing Operations**

The table saw motor is pushed to its limits when resawing. If the motor starts to bog down, slow down your feed rate. Motor overloading and blade wear can be reduced by using a ripping blade. Ripping blades are designed to clear the sawdust quickly.

### Components Needed for Resawing:

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

### To perform resawing operations, do these steps:

- DISCONNECT THE SAW FROM POWER!
- 2. Remove the standard table insert and the blade guard assembly.
- 3. Install a ripping blade and the riving knife, lower the blade below the table, then install a zero clearance table insert.

# **AWARNING**

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.



**4.** Attach the auxiliary fence to the standard fence and set it to the desired width.

**Note:** When figuring out the correct width, do not forget to account for blade kerf and the inaccuracy of the fence scale while the auxiliary fence is installed. Typically it is best to use a measuring tape to set the fence.

- 5. Place the workpiece against the auxiliary fence and slide the resaw barrier against the workpiece, as shown in **Figure 70**. Now clamp the resaw barrier to the top of the table saw at both ends.
- **6.** Slide the workpiece over the blade to make sure it moves smoothly, then remove the workpiece.
- Raise the blade approximately an inch, or close to half the height of the workpiece (Figure 71), whichever is less.
- **8.** Plug in the table saw, turn it *ON*, and use a push stick or push block to feed the workpiece through the blade, using a slow and steady feed rate.
- **9.** Flip the workpiece end for end, keeping the same side against the fence, and run the workpiece through the blade.
- 10. Repeat Steps 7-9 until the blade is close to half of the height of the board to be resawn. The ideal completed resaw cut will leave a 1/8" connection when the resawing is complete as shown in Figure 71. Leaving a 1/8" connection will reduce the risk of kickback.
- 11. Turn *OFF* the table saw, then separate the parts of the workpiece and hand plane the remaining ridge to remove it.
- **12.** When finished resawing, remove the resaw barrier and auxiliary fence, then re-install the blade guard/spreader or riving knife and standard table insert.

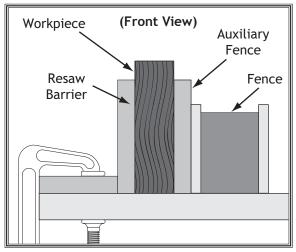


Figure 70. Ideal resaw workpiece setup.

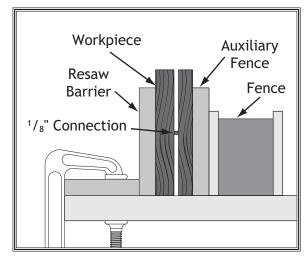


Figure 71. Ideal completed resaw cut.

# 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.

# **A**CAUTION

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



# ACCESSORIES Table Saw Accessories

The following Table Saw accessories may be available through your local Woodstock International Inc. Dealer. If you do not have a dealer in your area, these products are also available through online dealers. Please call or e-mail Woodstock International Inc. Customer Service to get a current listing of dealers at: 1-800-840-8420 or at sales@woodstockint.com.

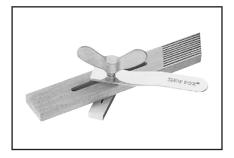
The Model D3246 Shop Fox Tenoning Jig can help you produce perfect tenons for mortise and tenon joinery. This tenoning jig also adjusts for angled tenon cutting set-ups. Standard <sup>3</sup>/<sub>8</sub>" x <sup>3</sup>/<sub>4</sub>" miter bar fits all miter gauge slots including T-slots.



The Model W1500 Shop Fox Right Angle Jig is constructed using top quality aluminum castings and plates which are machined to exacting tolerances. It has the perfect weight-use ratio to dampen vibration, yet is still light enough to easily slide the workpiece through the machining process. Its quality and precision are evident from the first cut. Cut tenons, dados, rail ends, and finger joints safely and with complete accuracy.



The Model D3096 Shop Fox Featherboard can reduce the risk of kick-back and help you achieve consistent results. Designed to lock into standard  $^{3}/_{8}$ " x  $^{3}/_{4}$ " miter gauge slots, these featherboards are adjustable for various stock widths and miter slot locations. No drilling or bulky clamp arrangements.



The **Model D3122** Shop Fox **Push Stick** can help you keep your hands a safe distance from blades and cutters while still maintaining control of the workpiece against machine fences. A true necessity when running narrow stock. Durable handle is designed for maximum control. Measure 131/2" overall.

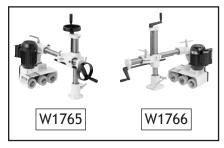




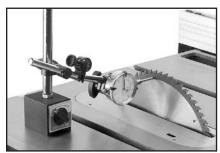
The Model W1727 Shop Fox 1 HP Dust Collector is the perfect companion for the Model W1819/W1820. It packs a 1 HP, 110V/220V, single-phase motor and 800 CFM air suction capacity.



**Power Feeders** will make light work out of those big jobs with greater accuracy and safety. The **Model W1765** features a  $^{1}/_{4}$  HP, 110V, 1.8 Amp motor. The **Model W1766** features a  $^{1}/_{2}$  HP, 220V, 4 Amp motor. Both models feature forward/reverse, XYZ adjustment, multiple feed speeds, and synthetic rubber wheels.

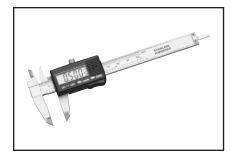


The Model D3207 Magnetic Base with Dial Indicator in Case is the best value in precision measuring instruments. Powerful magnetic base with infinitely adjustable control arm, fine tuning beam and magnetic switch. Add to this the 1" travel dial indicator with divisions of 0.001", 0.100" per revolution, and a 0.100" counter, and any setup job is a snap.



**Bald Eagle Digital Calipers** are equipped with the following features: Extra-large LCD readout. Accuracy:  $\pm$  0.001"/ 0.02mm. Resolution: 0.0005/0.01mm. Inch and metric digital display. Stainless steel construction. Built-in computer interface port with automatic shutoff.

BE1031: 4" Digital Caliper BE1033: 8" Digital Caliper



High-precision **Aluminum Squares** are perfect for square layouts and machine setup.

**D3383:** 4" Precision Square **D3384:** 6" Precision Square





# SHOP-MADE SAFETY ACCESSORIES

# **Featherboards**

Easily made from scrap stock, featherboards (Figure 72) provide an added degree of protection against kickback, especially when used together with push sticks. They also maintain pressure on the workpiece to keep it against the fence or table while cutting, which makes the operation easier and safer because the cut can be completed without the operator's hands getting near the blade. The angled ends and flexibility of the fingers allow the workpiece to move in only one direction, which helps slow/stop the workpiece if a kickback occurs.

### Making a Featherboard

This sub-section covers the two basic types of featherboards: 1) Those secured by clamps to the table or fence, or 2) those secured by a wood runner that mounts in the table saw miter slot.

Materials for Clamp-Mounted Featherboard Hardwood <sup>3</sup> / <sub>4</sub> " x 3"-6" x 10"-28"	. 1
Materials for Miter Slot-Mounted Featherboard	
Hardwood <sup>3</sup> / <sub>4</sub> " x 3"-6" x 10"-28"	. 1
Hardwood <sup>3</sup> / <sub>8</sub> " x (Miter Slot Width) x 5"L	1
Wing Nut 1/4"-20	1
Flat Head Screw 1/4"-20 x 2"	. 1
Flat Washer 1/4"-20	1

### To make a featherboard, do these steps:

- 1. Cut a hardwood board <sup>3</sup>/<sub>4</sub>" thick to size. The length and width of the board can vary according to your design. Most featherboards are 10"-28" long and 3"-6" wide. Make sure the wood grain runs parallel with the length of the featherboard, so the fingers you create in **Step 3** will bend without breaking.
- 2. Cut a 30° angle at one end of the board.

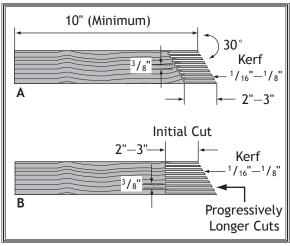


Figure 72. Patterns for featherboards (top view shown).

# **ACAUTION**

We recommend using a bandsaw for making fingers because it tends to be safer. A table saw can be used, but it will over-cut the underside of the ends, produce a thicker kerf, and require you to stop the blade halfway through the cut, which can be dangerous.

# **NOTICE**

Only steps 1-3 are required to make a clamp-mounted featherboard.



3. Make a series of end cuts with the grain, approximately  $\frac{3}{8}$ "- $\frac{1}{4}$ " apart and 2"-3" long, as shown in Figure 72 (A).

Alternatively, start cuts at 2"-3" deep, then make them progressively deeper, as shown in **Figure 72** (B).

**IMPORTANT:** Cuts made across the grain will result in weak fingers that easily break when flexed. When made correctly, the fingers should withstand flexing from moderate pressure. To test the finger flexibility, push firmly on the ends with your thumb. If the fingers do not flex, they are likely too thick (the cuts are too far apart).

- 4. Rout a 1/4"-3/8" wide slot 4"-5" long in the workpiece and 1"-2" from the short end of the featherboard (see Figure 73).
- 5. Cut a miter bar that will fit in the table miter slot approximately 5" long, as shown in Figure 74.

**Tip:** Consider making the miter bar longer for larger featherboards—approximately half the length of the total featherboard—to support the force applied to the featherboard during use.

- 6. Drill a 1/4" hole in the center of the bar, then countersink the bottom to fit a 1/4"-20 flat head screw.
- 7. Mark a 4" line through the center of the countersunk hole, then use a jig saw with a narrow blade to cut it out.
- **8.** Assemble the miter bar and featherboard with a <sup>1</sup>/<sub>4</sub>"-20 x flat head screw, flat washer, and a wing nut or a star knob (see **Figure 75**). Congratulations! Your featherboard is complete.

**Tip:** The length of the flat head screw depends on the thickness of the featherboard—though  $1^{1}/2^{"}$  to  $2^{"}$  lengths usually work.

Now, proceed to **Mounting Featherboard in Miter Slot** on **Page 57**.

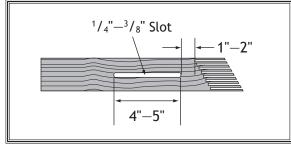


Figure 73. Slot routed in featherboard.

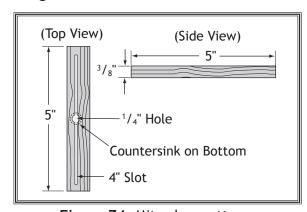
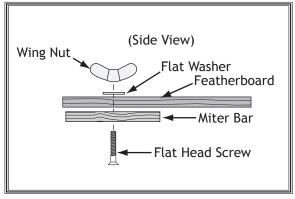


Figure 74. Miter bar pattern.



**Figure 75.** Assembling miter slot featherboard components.



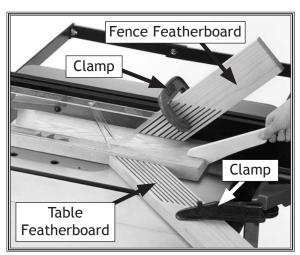
### Mounting Featherboards with Clamps

- 1. Lower the saw blade, then adjust the fence to the desired width and secure it.
- 2. Place the workpiece against the fence, making sure it is 1" in front of the blade.
- 3. Place a featherboard on the table away from the blade so all fingers point forward and contact the workpiece (see Figure 76).
- 4. Secure the featherboard to the table with a clamp.
- **5.** Check the featherboard by pushing it with your thumb to ensure it is secure.
  - If the featherboard moves, tighten the clamp more.
- 6. Mount a second featherboard to the fence with another clamp (see Figure 76), then repeat Step 5 to ensure it is secure.

### Mounting Featherboard in Miter Slot

- 1. Lower the saw blade, then adjust the fence to the desired width and secure it.
- 2. Place the workpiece evenly against the fence, with the end approximately 1" in front of the blade.
- 3. Slide the featherboard miter bar into the miter slot, making sure the fingers slant toward the blade, as shown in **Figure 77**.
- 4. Position the fingered edge of the featherboard against the edge of the workpiece, so that all of the fingers contact the workpiece. Slide the featherboard toward the blade until the first finger is nearly even with the end of the workpiece, which should be approximately 1" away from the blade.
- 5. Double check the workpiece and the featherboard to ensure they are properly positioned as described in Step 4. Then secure the featherboard to the table. Check the featherboard by hand to make sure it is tight.

**Note:** The featherboard should be placed firmly enough against the workpiece to keep it against the fence but not so tight that it is difficult to feed the workpiece.



**Figure 76.** Example of featherboards secured with clamps.

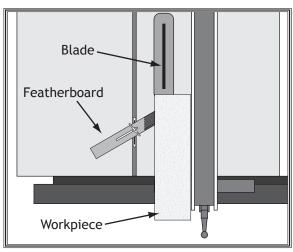


Figure 77. Featherboard installed in miter slot and supporting workpiece for ripping cut.

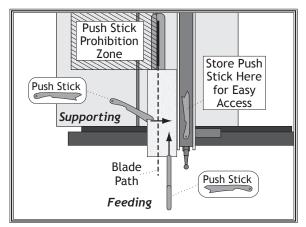


# **Push Sticks**

When used correctly, push sticks reduce the risk of injury by keeping hands away from the blade while cutting. In the event of an accident, a push stick can absorb damage that would have otherwise happened to hands or fingers. Use push sticks whenever your hands will get within 12" of the blade. To maintain control when cutting large workpieces, start the cut by feeding with your hands then use push sticks to finish the cut, so your hands are not on the end of the workpiece as it passes through the blade.

**Feeding:** Place the notched end of the push stick against the end of the workpiece (see inset **Figure 78**), and move the workpiece into the blade with steady downward and forward pressure.

**Supporting:** A second push stick can be used to keep the workpiece firmly against the fence while cutting. When using a push stick in this manner, only apply pressure before the blade; otherwise, pushing the workpiece against or behind the blade will increase the risk of kickback (see **Figure 78**).



**Figure 78.** Using push sticks to rip narrow stock.

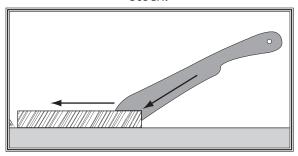


Figure 79. Side view of push stick in-use.

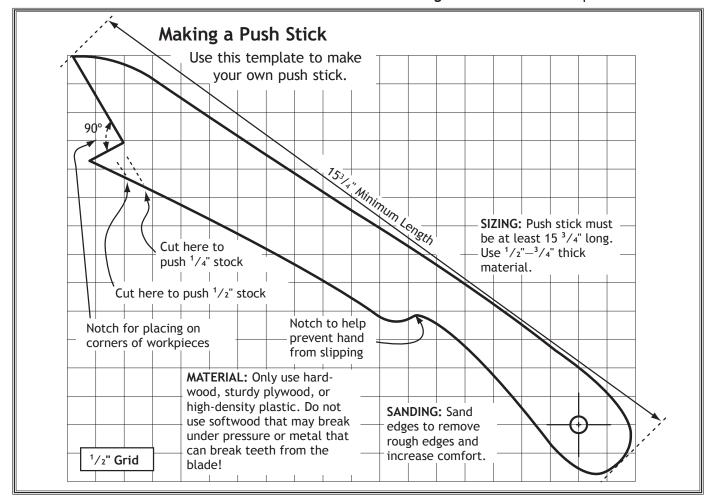


Figure 80. Template for a basic shop-made push stick (not shown at actual size).



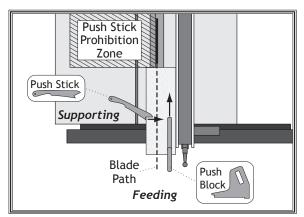
# **Push Blocks**

When used correctly, a push block reduces the risk of injury by keeping hands away from the blade while cutting. In the event of an accident, a push block often takes the damage that would have otherwise happened to hands or fingers.

A push block can be used in place of or in addition to a push stick for feeding workpieces into the blade. Due to their design, push blocks allow the operator to apply firm downward pressure on the workpiece that could not otherwise be achieved with a push stick.

The push block design on this page (see Figure 83) can be used in two different ways (see Figure 82). Typically, the bottom of the push block is used until the end of the workpiece reaches the blade.

The notched end of the push block is then used to push the workpiece the rest of the way through the cut, keeping the operator's hands at a safe distance from the blade. A push stick is often used at the same time in the other hand to support the workpiece during the cut.



**Figure 81.** Using a push block and push stick to make a rip cut.

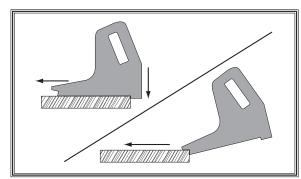


Figure 82. Side view of push block in use.

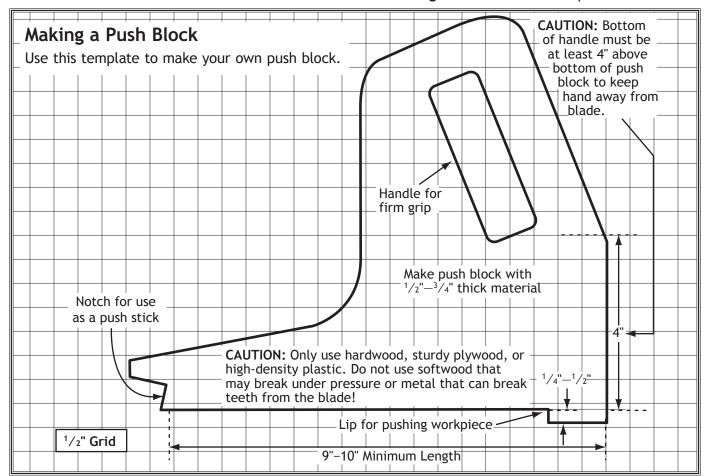


Figure 83. Template for a basic shop-made push stick (not shown at actual size).



# Narrow-Rip Auxiliary Fence & Push Block

There are designs for hundreds of specialty jigs that can be found in books, trade magazines, and the internet. These types of jigs can greatly improve the safety and consistency of cuts. They are particularly useful during production runs when dozens or hundreds of the same type of cut need to be made.

The narrow-rip auxiliary fence and push block system shown in this section is an example of a specialty jig that can be made to increase the safety of very narrow rip cuts.

# Making a Narrow-Rip Push Block for an Auxiliary Fence

materials for Narrow-Rip Push Block & Auxiliary Fenc	e
Hardwood 3/4" x 3" x Length of Fence	1
Plywood 1/2" x 51/4" x Length of Fence	1
Plywood 1/2" x 10" x 5"-9"	1
Plywood 1/2" x 15" x 53/8"	1
Wood Screws #8 x 1 <sup>1</sup> / <sub>4</sub> " As Need	ed

### To make a narrow-rip push block, do these steps:

1. Cut a piece of 1/2" thick plywood 51/4" wide and as long as your table saw fence; cut a piece of 3/4" thick hardwood 3" wide and as long as your table saw fence, as shown in **Figure 84**.

**Note:** We recommend cutting the hardwood board oversize, then jointing and planing it to the correct size to make sure the board is square and flat. Only use furniture-grade plywood or kiln-dried hardwood to prevent warping.

- Pre-drill and countersink eight pilot holes <sup>3</sup>/<sub>8</sub>" from the bottom of the 3" wide board, as shown in Figure 85, then fasten the 5<sup>1</sup>/<sub>4</sub>" and 3" wide boards with eight #8 x 1<sup>1</sup>/<sub>4</sub>" wood screws.
- 4. Using the 1/2" material you used in the previous steps, cut out pieces for the push block per the dimensions shown in **Figure 86**; for the handle, cut a piece 10" long by 5"-9" high and shape it as desired to fit in your hand.
- 5. Attach the handle to the base with #8 x  $1^{1}/_{4}$ " wood screws, attach the lip to the base with cyanoacrylate type wood glue.

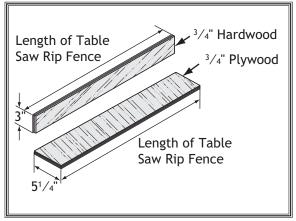


Figure 84. Auxiliary fence dimensions.

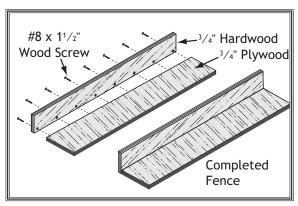
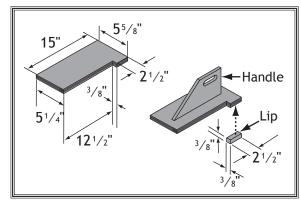


Figure 85. Location of pilot holes.



**Figure 86.** Push block dimensions and construction.



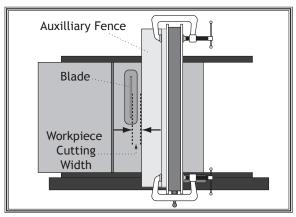
### Using the Auxiliary Fence and Push Block

- 1. Place the auxiliary fence on the table and clamp it to the fence at both ends, then adjust the distance between the auxiliary fence and the blade—this determines how wide the workpiece will be ripped (see Figure 87).
- 2. Install the blade guard, then secure the spreader pawls in the upright position, as shown in Figure 50 on Page 37, so they do not interfere with the push block lip.
- 3. Place the workpiece 1" in front of the blade and evenly against the table and the auxiliary fence.
- **4.** Turn the saw *ON*, then begin ripping the workpiece using a push stick for side support.

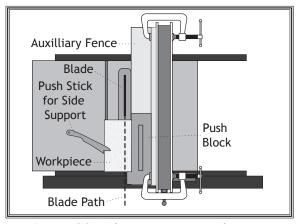
As the workpiece nears the end of the cut, place the push block on the auxiliary fence with the lip directly behind the workpiece, then release the push stick just before it is even with the blade (see Figure 89). Guide the workpiece the rest of the way through the cut with the push block, then re-install the pawls on the spreader when cutting operations are finished.



Keep the blade guard installed and in the down position. Failure to do this could result in serious personal injury or death.



**Figure 87.** Adjusting ripping distance between blade and auxiliary fence.



**Figure 88.** Adjusting ripping distance between blade and auxiliary fence.

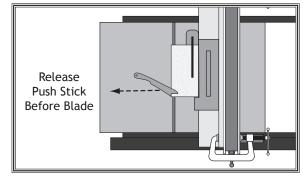


Figure 89. Ripping with push block.



# Outfeed & Support Tables

One of the best accessories for improving the safety and ease of using a table saw is simply placing a large table (outfeed table) behind the saw to catch the workpiece (see **Figure 90**). Additionally, another table to the left of the saw (support table) can also help support large workpieces so they can be cut safely and accurately.



**Figure 90.** Example of outfeed & support tables.

# **Crosscut Sled**

A crosscut sled (see **Figure 91**) is a fantastic way to improve the safety and accuracy of crosscutting on the table saw. Most expert table operator uses a crosscut sled when they have to crosscut a large volume of work, because the sled offers substantial protection against kickback when crosscutting.



Figure 91. Example of crosscut sled.



# **MAINTENANCE**

# Schedule

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

### Daily Check:

- Inspect blades for damage or wear.
- Check for loose mounting bolts/arbor nut.
- · Check cords, plugs, and switch for damage.
- Check for any other condition that could hamper the safe operation of this machine.
- Wipe the table clean after every use—this ensures moisture from wood dust does not remain on bare metal surfaces.

### Weekly Maintenance:

- Wipe down the table surface and grooves with a lubricant and rust preventive such as SLIPIT®.
- Vacuum dust buildup from the motor housing and trunnions.
- Clean the pitch and resin from the saw blade with a cleaner like OxiSolv® Blade & Bit Cleaner.

### Monthly Maintenance:

• Check/tighten the belt tension (Page 74).

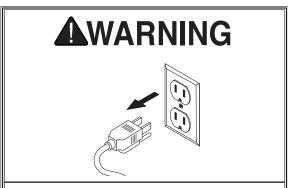
# Cleaning

Cleaning the Model W1819/W1820 is relatively easy. Vacuum excess wood chips and sawdust, and wipe off the remaining dust with a dry cloth. If any resin has built up, use a resin dissolving cleaner to remove it.

After cleaning, treat all unpainted cast iron and steel with a non-staining lubricant.

Occasionally it will become necessary to clean the internal parts with more than a vacuum. To do this, remove the table top and clean the internal parts with resin/pitch dissolver or mineral spirits and a stiff wire brush or steel wool. DO NOT USE WATER. WATER WILL CAUSE CAST IRON TO RUST.

Make sure the internal workings are dry before using the saw again, so that wood dust will not accumulate. If any essential lubrication is removed during cleaning, re-lubricate those areas.



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



# Lubrication

An essential step for lubrication is cleaning the components before lubricating them.

This step is critical because dust and chips build up on lubricated components, which makes them hard to move. Simply adding more grease to built-up grime will not result in smooth moving components.

Clean the components in this section with an oil/grease solvent cleaner.

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

- Trunnion Slides and Orientation Gears
- Worm Gears, Trunnion and Bearing Housing Teeth

### Trunnion Slides & Orientation Gears

Clean the trunnion slides with mineral spirits and a rag, and brush a dab of lithium grease into each groove. Move the blade tilt back and forth to spread the grease (see Figure 92).

Also use a wire brush and mineral spirits to clean any debris or grime off the orientation gears, then apply lithium grease to the gears with a brush.

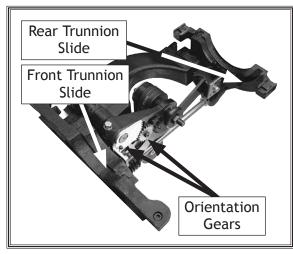


Figure 92. Trunnion slides and tilt leadscrew.

# Worm Gears, Trunnion and Bearing Housing Teeth

Clean away any built up grime and debris with a wire brush and mineral spirits from the worm gears and the teeth (see **Figure 93**) on the bearing housing and trunnion. Then use a brush or rag to apply a thin coat of white lithium grease to the gears and teeth.

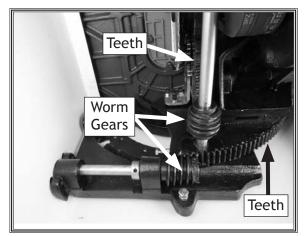


Figure 93. Worm gears and teeth.



# **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.

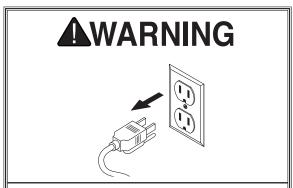
# **Blade Tilt Stops**

The table saw features stop bolts that stop the blade exactly at 45° and 90° when tilting it with the handwheel. The tilt scale reads "0" when the blade is 90° to the table. The stops have been set at the factory and should require no adjustments, unless you notice that your cuts are not accurate.

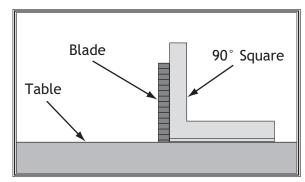
Tools Needed	Qty
90° Square	1
45° Square	
Hex Wrench 3mm	
Wrench 10mm	
Wrench 13mm	

### Setting 90° Stop Bolt

- 1. DISCONNECT THE SAW FROM POWER!
- 2. Raise the blade as high as it will go, then tilt it toward 0° until it stops and cannot be tilted any more.
- **3.** Place a 90° square against the table and blade so it contacts the blade evenly from bottom to top, as shown in **Figure 94**. Make sure a blade tooth does not obstruct the placement of the square.
  - If the blade is 90° to the table, then adjustments do not need to be made. Make sure the tilt indicator arrow shown in **Figure 95** points to the 0° mark on the scale. Adjust the position by loosening the button head screw, moving the indicator with your fingers, then tightening the screw.
  - If the blade is not  $90^{\circ}$  to the table, you will need to adjust the  $90^{\circ}$  stop screw. Proceed to the next step.



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



**Figure 94.** Checking blade at 90°.



Figure 95. Tilt indicator arrow.



- **4.** Tilt the blade away from 0° by about 5°, so there is room for the stop bolt to move.
- 5. Open the motor access cover, loosen the jam nut shown in Figures 96-97, adjust the stop bolt up or down according to how far off the blade was from 90°. Repeat Step 3 and, if necessary, make additional adjustments to the stop bolt until the table stops at 90°.
- 6. Tighten the jam nut, then close the motor cover.

### Setting 45° Stop Bolt

- 1. DISCONNECT THE SAW FROM POWER!
- 2. Raise the blade as high as it will go, then tilt it towards 45° until it stops and cannot be tilted any more.
- 3. Place a 45° square against the table and blade so it contacts the blade evenly from bottom to top, as shown in Figure 98. Make sure a blade tooth does not obstruct the placement of the square.
  - If the blade is 45° to the table, then adjustments do not need to be made.
  - If the blade is not 45° to the table, you will need to adjust the 45° stop screw. Proceed to the next step.
- **4.** Tilt the blade to 15°, so there is room for the stop bolt to move, then remove the dust port to access the stop bolt.
- 5. Loosen the jam nut on the 45° stop bolt (see **Figure 99**) with a 13mm wrench, adjust the stop bolt up or down according to how far off the blade was from 45°.
- 6. Continue adjusting the stop bolt until it contacts the cabinet when the blade is at 45°, then tighten the jam nut.
- 7. Close the dust port.

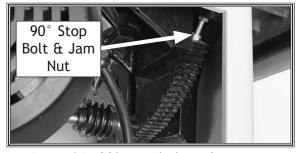


Figure 96. 90° stop bolt and jam nut.



Figure 97. 90° stop bolt and jam nut (table removed for clarity).

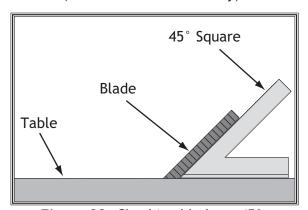


Figure 98. Checking blade at 45°.

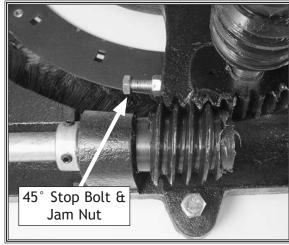


Figure 99. 45° stop bolt and jam nut.



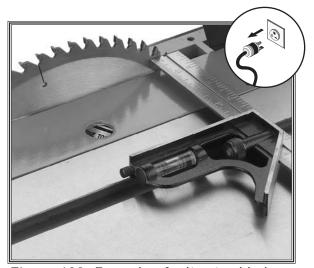
# Miter Slot to Blade Parallelism

Your table saw will give the best results if the miter slot and the rip fence are parallel to the blade. If either of these are not exactly parallel, your cuts and your finished work will be lower in quality, but more importantly, the risk of kickback will be increased. Take the time to adjust your table saw properly. A few minutes now will be time well spent.

Tools Needed	Qty
Adjustable Square	1
Marker	1

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

- DISCONNECT THE SAW FROM POWER!
- 2. Use an adjustable square to measure the distance from the miter slot to a carbide tip on the blade, as shown in **Figure 100**. Make sure that the face of the adjustable square is even along the miter slot.
- 3. With the end of the adjustable square just touching the tooth or carbide tip, lock the square in place. Now, mark the carbide tip with a marker where you made this measurement.
- **4.** Rotate the marked blade tip to the other end of the table insert.
- 5. 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.
  - If the blade tip measurement is not the same, the table will need to be adjusted. Proceed to Step 6.
  - If the blade tip measurement is the same on both sides, go to Step 7.
- 6. To adjust the table, loosen the four cap screws in the table mounting locations (see Figure 101) and slightly tap the table in the needed direction. Repeat Steps 2-5 until the blade and miter slot are parallel.
- 7. Tighten the table mounting cap screws in a crisscross, alternating manner.



**Figure 100.** Example of adjusting blade to miter slot.

# **ACAUTION**

The saw blade is dangerously sharp. Use extra care or wear gloves when handling the blade or working near it.

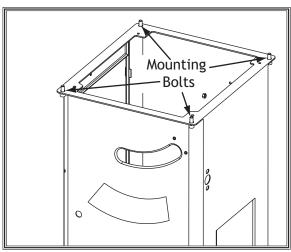


Figure 101. Table mounting bolts.



# Spreader or Riving Knife Alignment

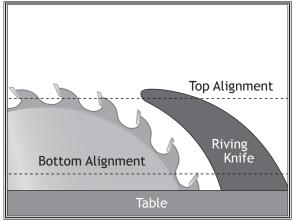
### **Checking Alignment**

The blade guard spreader and riving knife must be aligned with the blade when installed. If the spreader/riving knife is not aligned with the blade, then the workpiece will before forced sideways during the cut, which will increase the risk of kickback.

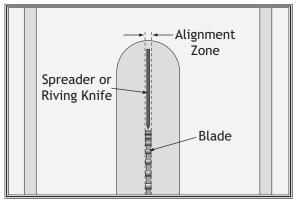
Tools Needed	Qty
Straightedge	1

To check the spreader/riving knife alignment, do these steps:

- 1. DISCONNECT THE SAW FROM POWER!
- 2. Raise the saw blade to the maximum height so you have easy working access.
- 3. Place the straightedge alternately against the top and bottom of blade and spreader/riving knife, as shown in Figure 102. The spreader/riving knife should be parallel with the blade along its length at both positions, and it should be in the "Alignment Zone," as shown in Figure 103.
  - If the spreader/riving knife is not parallel with the blade and inside the alignment zone, then it needs to be adjusted. Proceed to Adjusting Alignment instructions.
  - If the spreader/riving knife is not parallel with the blade at either the top or bottom, it may be bent.
- **4.** Remove the spreader/riving knife and place it on a flat surface and check to see if the spreader/riving knife lays evenly along its length.
  - If the spreader/riving knife does not lay evenly, proceed to Adjusting Bent Spreader/Riving Knife on Page 69.



**Figure 102.** Checking top and bottom riving knife parallelism with blade.



**Figure 103.** Spreader/riving knife alignment zone.



### **Adjusting Alignment**

The spreader/riving knife mounting position can be adjusted into alignment with the blade using the set screws on the spreader/riving knife mounting block.

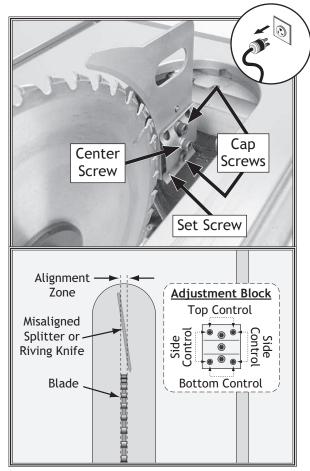
Possible Tools Needed	Qty
Hex Wrench 3mm	1
Hex Wrench 5mm	1

To adjust the spreader/riving knife position, do these steps:

- DISCONNECT THE SAW FROM POWER!
- Remove the table insert.
- Adjust each pair of set screws that controls the direction required to move the mounting block so the riving knife can be aligned with the blade (see Figure 104). Make sure to move both screws in even increments.
- 4. Re-install the table insert.
- 5. Follow Checking Alignment, Steps 1-3 to determine if the spreader/riving knife is parallel with the blade and inside the "Alignment Zone."
  - If the spreader/riving knife is in the alignment zone, no additional steps are necessary.
  - If the spreader/riving knife is still not in the alignment zone, continue adjusting the set screws on the mounting block as necessary to correctly position the spreader/riving knife.
- **6.** Tighten the two cap screws on the mounting block to secure the spreader/riving knife adjustment.

### Adjusting Bent Spreader/Riving Knife

- 1. DISCONNECT THE SAW FROM POWER!
- Bend the spreader or riving knife by hand while installed, then follow Steps 1-3 in Checking Alignment to determine if it is parallel with the blade and inside the "Alignment Zone" (refer to Checking Alignment).
  - If this does not work, remove it to straighten.
  - If you cannot straighten it properly, replace it.



**Figure 104.** Set screws for adjusting spreader/riving knife position.



# **Fence Adjustments**

There are four main adjustments for the fence: (1) square, (2) height, (3) parallelism, and (4) clamping pressure. Keep in mind that these adjustments are interconnected and some trial-and-error may be needed to achieve satisfactory results.

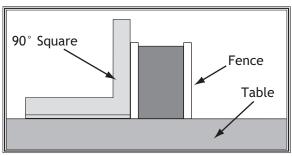
Tools Needed	Qty		
Hex Wrench 6mm	1		
Square	1		
Felt-Tipped Marker	1		

### Square and Height

The fence face must be square to the table in order to produce square cuts. The fence should be adjusted so it does not drag across the table surface.

To check/adjust the fence height and squareness to the table, do these steps:

- 1. DISCONNECT THE SAW FROM POWER!
- 2. Place a square on the table against the face of the fence (see Figure 105) to check if the fence is square to the table.
  - If the fence is square to table, go to **Step 4**.
  - If the fence is not square to table, go to **Step 3**.
- 3. Adjust the set screws (see Figure 106) on top of the fence bracket to ensure the fence face is 90° to the table, then tighten the knurled lock nuts.
- 4. Look at the gap between the fence and table top.
  - If the gap is approximately 1/16" and even from the front of the table to the back, then no additional adjustments are necessary.
  - If the gap is uneven, if the fence height is more than 1/8", or if the fence touches the table, then continue with **Step 5**.
- 5. Adjust the fence height with the rear rail foot until the gap between the table and the fence is approximately 1/16" and even from the front of the table to the back. Note: If the front end of the fence needs to be adjusted up or down, use the set screws from Figure 106; turn them in even increments and recheck the squareness afterwards.



**Figure 105.** Checking if fence is square to table.

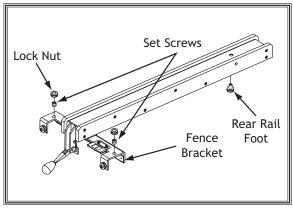


Figure 106. Fence components used to adjust fence height and squareness to table.



#### Clamping Pressure and Parallelism

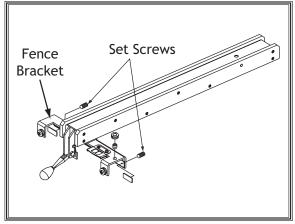
Set screws on the rear side of the fence bracket adjust the clamping pressure to hold your fence securely, and position the fence parallel to the blade.

To adjust the fence clamping pressure and parallelism to the blade, do these steps:

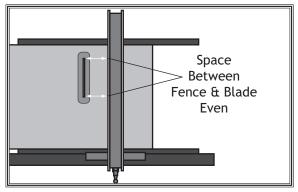
- 1. DISCONNECT THE SAW FROM POWER!
- **2.** Remove the fence.
- 3. Equally adjust the set screws shown in Figure 107 on the rear side of the front bracket as necessary until the clamping pressure is strong enough that the fence will not move as pressure is applied against it.
- **4.** Place the fence approximately 4" away from the blade.
- 5. Measure the distance between the fence and the front of the blade at one end of the table insert, then mark the tooth that you measured from with a felt-tipped marker.
- 6. Rotate the blade to the other end of the table insert (see Figure 108), and recheck the distance between the fence and the blade to ensure they are parallel.
- 7. Use trial-and-error to adjust the set screws so the fence is parallel to the blade and the clamping pressure is sufficient.

**Optional:** Some woodworkers prefer to offset the rear of the fence <sup>1</sup>/<sub>64</sub>" from the blade, as shown in **Figure 109**, to help prevent the workpiece from binding and burning.

The argument is that this offset adjustment reduces the chance of kickback by alleviating potential binding that may occur between the backside of the blade and fence. The trade-off is slightly less accurate cuts.



**Figure 107.** Location of set screws used to adjust fence parallelism and clamping pressure.



**Figure 108**. Example of fence aligned parallel to miter slot.

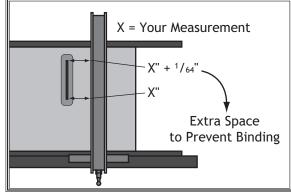


Figure 109. Adjusting fence with a 1/64" offset.



#### Fence Scale Calibration

The fence scale indicator window, shown in **Figure 110**, can be calibrated with the fence scale if you notice that your cuts do not accurately match what is shown on the fence scale. The indicator adjusts by loosening the two mounting screws and sliding it in the desired direction.

Tools Needed	Qty
Hex Wrench 2.5mm	1
Scrap Piece of Wood	

### To calibrate the fence scale indicator windows, do these steps:

- 1. Position and lock the fence at 13", as indicated by the scale, cut your scrap piece of wood.
- 2. Reposition and lock the fence at 12", as indicated by the scale.
- 3. Flip your scrap piece of wood over, placing the side that was cut in **Step 2** against the fence, and cut your scrap piece of wood.
- 4. Measure the width of the freshly cut workpiece with a tape measure. The workpiece width should be exactly 12". If it is not, then adjust the indicator window to match the width of the workpiece.

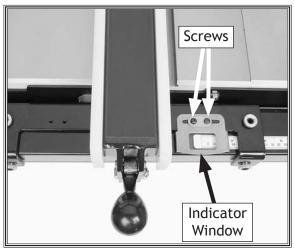


Figure 110. Fence indicator window.



### Miter Gauge Adjustments

The miter gauge can be adjusted so it is perpendicular to the blade and so it is snug in the T-slot.

Tools Needed	Qty
90° Square	1
45° Square	1
Hex Wrench 2.5mm	1
Hex Wrench 2mm	1
Hex Wrench 3mm	1

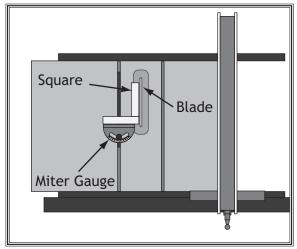
#### Checking/Setting 90° Stops

- 1. DISCONNECT THE SAW FROM POWER!
- 2. Slide the miter gauge into the T-slot on the table.
- 3. Loosen the miter gauge lock knob, pull out the positive stop knob, then pivot the miter gauge body to 90° so the stop knob springs into position.
- **4.** Place the 90° square evenly against the face of the miter gauge and the blade, as shown in **Figure 111**.
  - If the square touches the miter body and the body of the blade (not the teeth) evenly at the same time, then it is square to the blade and the 90° stop is set correctly. No further adjustments are necessary.
  - If the square does not touch the miter body and blade body evenly at the same time, then proceed to Step 5.
- 5. Loosen the button head cap screws on the positive stop knob block (see Figure 112), adjust the miter body until it is flush with the square, then tighten the screws.
- **6.** Loosen the screw on the front of the miter bar, adjust the pointer to  $0^{\circ}$ , then tighten the screw.

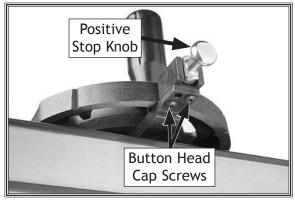
#### **Adjusting Miter Bar Tightness**

The miter bar can be adjusted so it fits more tightly in the miter slot.

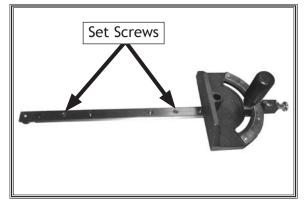
To increase the miter bar tightness, tighten the set screws shown in **Figure 113**; to decrease the miter bar tightness, loosen the set screws.



**Figure 111.** Checking 90° stop on miter gauge.



**Figure 112.** Screws for adjusting miter gauge body.



**Figure 113.** Screws for adjusting miter bar in miter slot.



# Belt Tension & Replacement

The three V-belts stretch slightly as the saw is used. Most of the belt stretching will happen during the first 16 hours of use, but it may continue in small increments through continued use.

Tools Needed	
Wrenches 18mm	

#### **Tensioning Belt**

- 1. DISCONNECT THE SAW FROM POWER!
- 2. Lower the blade completely, then open the motor cabinet.
- 3. Loosen the hex nuts on the motor shown in **Figure**114, and pivot the motor up and down to make sure that it is movable.
- **4.** Press down on the motor with one hand to keep the belt tension tight, then tighten the hex nuts.
- **5.** Press each V-belt in the center to check the belt tension.

The belts are correctly tensioned when there is approximately 1/2" deflection when they are pushed with moderate pressure, as shown in **Figure 115**.

- If there is more than 1/2" deflection when the V-belts are pushed with moderate pressure, loosen the hex nuts, adjust the motor downward, then tighten the hex nuts.
- 6. Close the motor access cover.

#### Replacing Belt

- 1. DISCONNECT THE SAW FROM POWER!
- 2. Lower the blade completely, then open the motor access cover.
- 3. Loosen the hex nuts that secure the motor (see Figure 114) and raise the motor fully to remove tension on the V-belts. Roll the V-belts off of the arbor and motor pulleys. Install a new matching set of V-belts onto the pulleys, lower the motor to tension the V-belts, then tighten the hex nuts.
- **4.** Follow **Step 5** in the **Tensioning Belt** subsection to check V-belt tension, then close the motor cover.

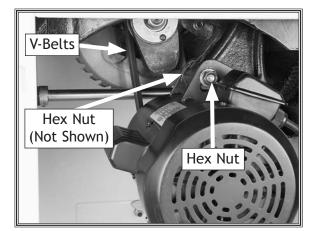


Figure 114. Motor mounting nut.

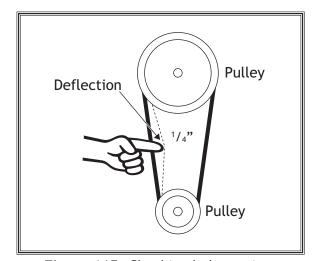


Figure 115. Checking belt tension.



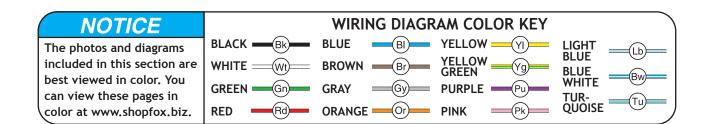
### **Electrical Safety Instructions**

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

### **AWARNING**

- SHOCK HAZARD. Working on wiring that is connected to a power source is extremely dangerous. Touching electrified parts will result in personal injury including but not limited to severe burns, electrocution, or death. Disconnect the power from the machine before servicing electrical components!
- QUALIFIED ELECTRICIAN. Due to the inherent hazards of electricity, only a qualified electrician should perform wiring tasks on this machine. If you are not a qualified electrician, get help from one before attempting any kind of wiring job.
- WIRE CONNECTIONS. All connections must be tight to prevent wires from loosening during machine operation. Double-check all wires disconnected or connected during any wiring task to ensure tight connections.
- WIRE/COMPONENT DAMAGE. Damaged wires or components increase the risk of serious personal injury, fire, or machine damage. If you notice that any wires or components are damaged while performing a wiring task, replace those wires or components before completing the task.

- MOTOR WIRING. The motor wiring shown in these diagrams is current at the time of printing, but it may not match your machine. Always use the wiring diagram inside the motor junction box.
- MODIFICATIONS. Using aftermarket parts or modifying the wiring beyond what is shown in the diagram may lead to unpredictable results, including serious injury or fire.
- capacitors and power inverters store an electrical charge for up to five minutes after being disconnected from the power source. To avoid being shocked, wait at least this long before working on these components.
- **ELECTRICAL REQUIREMENTS.** You MUST follow the electrical requirements at the beginning of this manual when connecting your machine to a power source.
- experiencing difficulties. If you are experiencing difficulties understanding the information included in this section, contact our Technical Support at (360) 734-3482.

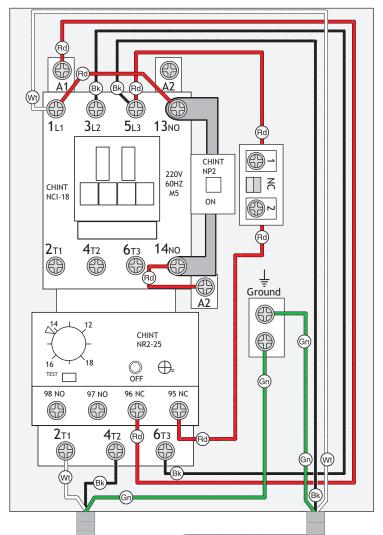




# Model W1819/W1820 Wiring Diagram



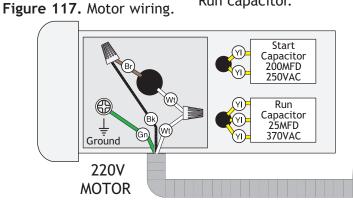
Figure 116. Magnetic switch.

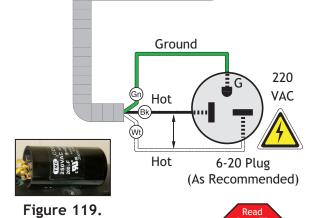




Minimum Market M

**Figure 118.** Run capacitor.





Start capacitor.



# **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!



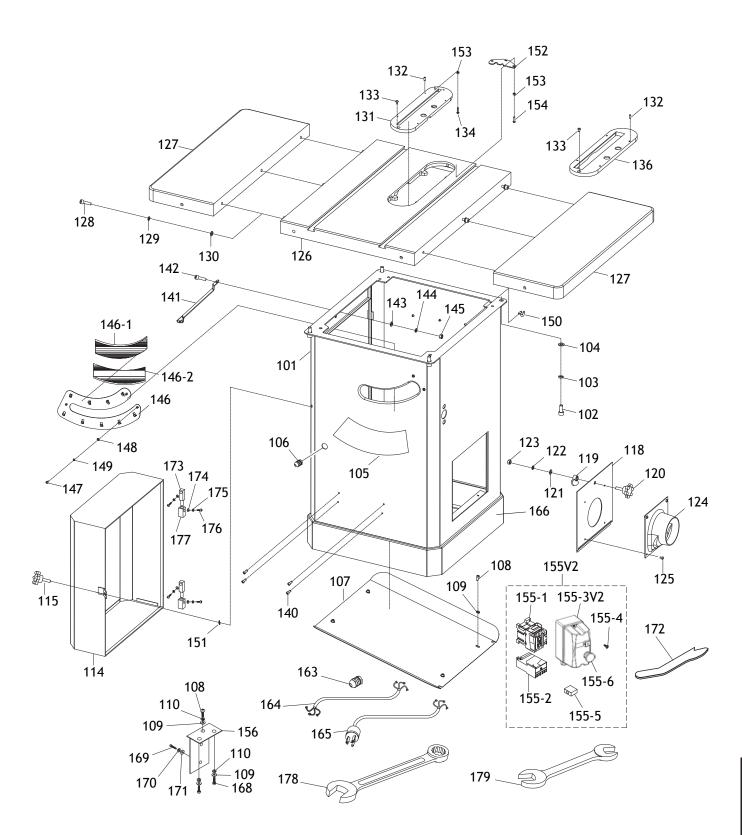
Symptom	Possible Cause	Possible Solution
Machine does not start or a	1. Locking pin installed.	1. Remove locking pin from ON button.
breaker trips.	2. Blown fuse.	2. Replace fuse/ensure no shorts.
	3. Power supply switched OFF or at	3. Ensure power supply is on/has correct voltage.
	fault.	
	4. Plug/receptacle at fault/wired	4. Test for good contacts; correct the wiring.
	wrong.	
	5. Motor connection wired wrong.	5. Correct motor wiring connections.
	6. Wall circuit breaker tripped.	6. Ensure circuit size is correct/replace weak breaker.
	7. Wiring open/has high resistance.	7. Check/fix broken, disconnected, or corroded wires.
	8. Motor ON/OFF switch at fault.	8. Replace switch.
	9. Start capacitor at fault.	9. Test/replace if faulty.
	10. Motor at fault.	10. Test/repair/replace.
Machine stalls or is under-	1. Feed rate/cutting speed too fast.	1. Decrease feed rate/cutting speed.
powered.	2. Workpiece material unsuitable for	
	machine.	
	3. Workpiece crooked; fence mis-	3. Straighten or replace workpiece/adjust fence.
	adjusted.	
	4. Machine undersized for task.	4. Use correct blade/reduce feed rate or depth of
		cut.
	5. Run capacitor at fault.	5. Test/repair/replace.
	6. Belt slipping.	6. Tension/replace belt (Page 74).
	7. Motor wired incorrectly.	7. Wire motor correctly.
	8. Plug/receptacle at fault.	8. Test for good contacts/correct wiring.
	9. Pulley/sprocket slipping on shaft.	9. Replace loose pulley/shaft.
	10. Motor bearings at fault.	10. Test/repair/replace.
	11. Contactor not energized/has poor	11. Test all legs for power/replace if faulty.
	contacts.	
	12. Motor overheated.	12. Clean motor, let cool, and reduce workload.
	13. Motor at fault.	13. Test/repair/replace.
Machine has vibration or	1. Motor or component loose.	1. Inspect/replace damaged bolts/nuts, and re-tighten
noisy operation.	'	with thread locking fluid.
	2. Blade at fault.	2. Replace warped/bent blade; resharpen dull blade.
	3. Belts worn or loose.	3. Tension/replace belts (Page 74).
	4. Pulley loose.	4. Realign/replace shaft, pulley, setscrew, and key.
	5. Motor mount loose/broken.	5. Tighten/replace.
	6. Machine incorrectly mounted.	6. Tighten mounting bolts; relocate/shim machine.
	7. Arbor pulley loose.	7. Retighten/replace arbor pulley.
	8. Motor fan rubbing on fan cover.	8. Fix/replace fan cover; replace loose/damaged fan.
	9. Arbor bearings at fault.	9. Replace arbor housing bearings; replace arbor.
	10. Motor bearings at fault.	10. Test by rotating shaft; grinding/loose shaft requires
		bearing replacement.



Symptom	Possible Cause	Possible Solution	
Blade is not aligned with	1. Blade is warped.	1. Replace blade (Page 35).	
miter slot or fence.	2. Table top is not parallel to blade.	2. Make table parallel to blade (Page 67).	
	3. Fence is not parallel to blade.	3. Make fence parallel to blade (Page 70).	
Blade does not reach 90°.	1. 90° stop bolt is out of adjustment.	1. Adjust 90° stop bolt ( <b>Page 65</b> ).	
	2. Sawdust stuck on stop bolt.	2. Clean sawdust off stop bolt.	
Blade hits insert at 45°.	1. 45° stop bolt is out of adjustment.	1. Adjust 45° stop bolt ( <b>Page 65</b> ).	
	2. Sawdust stuck on stop bolt.	2. Clean sawdust off stop bolt.	
	3. Hole in insert is inadequate.	3. File or mill the hole in the insert.	
	4. Table out of alignment.	4. Align blade to the table (Page 67).	
	5. Blade position is incorrect.	5. Adjust blade position.	
Board binds or burns when	1. Dull blade.	1. Replace blade.	
feeding through table saw.	2. Blade is warped.	2. Replace blade (Page 35).	
	3. Fence is not parallel to blade.	3. Make fence parallel to blade (Page 70).	
	4. Table top is not parallel to blade.	4. Make table parallel to blade (Page 67).	



# PARTS Body





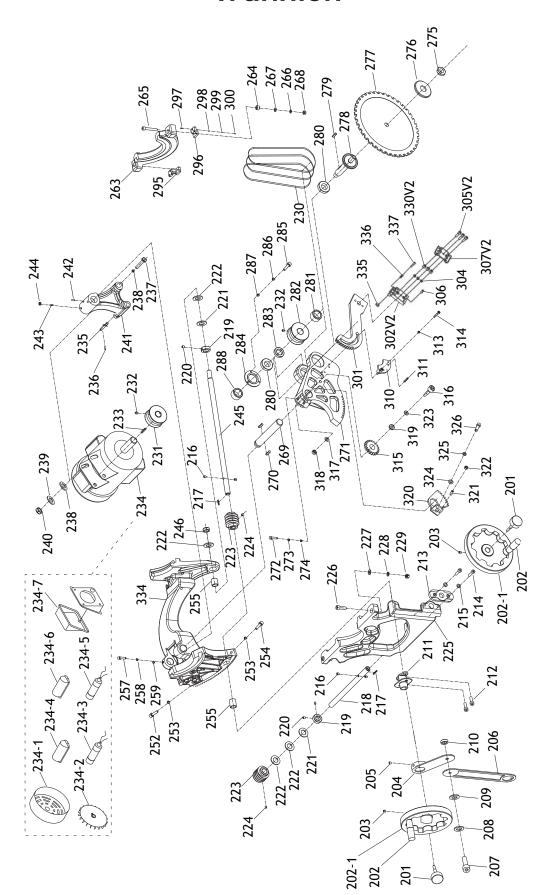
# **Body Parts List**

REF	PART #	DESCRIPTION
101	X1819101	CABINET STAND
102	X1819102	CAP SCREW M10-1.25 X 25
103	X1819103	LOCK WASHER 10MM
104	X1819104	FLAT WASHER 10MM
105	X1819105	TILT SCALE
106	X1819106	STRAIN RELIEF
107	X1819107	BASE PLATE
108	X1819108	PHLP HD SCR M6-1 X 12
109	X1819109	FLAT WASHER 6MM
110	X1819110	LOCK WASHER 6MM
114	X1819114	MOTOR COVER
115	X1819115	KNOB BOLT M6-1
118	X1819118	CLEAN-OUT DOOR
119	X1819119	DOOR LATCH
120	X1819120	KNOB BOLT M8-1.25
121	X1819121	FLAT WASHER 8MM
122	X1819122	LOCK WASHER 8MM
123	X1819123	HEX NUT M8-1.25
124	X1819124	DUST HOOD
125	X1819125	PHLP HD SCR M58 X 8
126	X1819126	TABLE
127	X1819127	EXTENSION WING
128	X1819128	CAP SCREW M8-1.25 X 30
129	X1819129	LOCK WASHER 8MM
130	X1819130	FLAT WASHER 8MM
131	X1819131	STANDARD TABLE INSERT
132	X1819132	SET SCREW M58 X 12
133	X1819133	PHLP HD SCR M58 X 12
134	X1819134	PHLP HD SCR M58 X 20
136	X1819136	DADO TABLE INSERT
140	X1819140	STEEL BLIND RIVET 4 X 10MM
141	X1819141	SHIPPING BRACE
142	X1819142	HEX BOLT M10-1.5 X 20
143	X1819143	FLAT WASHER 10MM
144	X1819144	LOCK WASHER 10MM
145	X1819145	HFX NUT M10-1.5

REF	PART #	DESCRIPTION
146	X1819146	DUST SHIELD
146-1	X1819146-1	UPPER BRUSH
146-2	X1819146-2	LOWER BRUSH
147	X1819147	PHLP HD SCR M47 X 12
148	X1819148	FLAT WASHER 4MM
149	X1819149	LOCK WASHER 4MM
150	X1819150	HOOK
151	X1819151	INT TOOTH WASHER 6MM
152	X1819152	LIMIT PLATE
153	X1819153	HEX NUT M58
154	X1819154	PHLP HD SCR M58 X 20
155V2	X1819155V2	MAG SWITCH ASSY CHINT V2.1.15
155-1	X1819155-1	CONTACTOR CHINT NC1-1810
155-2	X1819155-2	OL RELAY CHINT NR2-25N 12-18A
155-3V2	X1819155-3V2	SWITCH BOX FRONT/BACK V2.1.15
155-4	X1819155-4	MAG SWITCH COVER SCREW
155-5	X1819155-5	ON/OFF SWITCH CHINT NP2
155-6	X1819155-6	E-STOP BUTTON ANIUEC LA158-BE102
156	X1819156	SWITCH BRACKET
163	X1819163	STRAIN RELIEF
164	X1819164	MOTOR CORD 14AWG 3C
165	X1819165	POWER CORD W/PLUG
166	X1819166	BLACK TRIM TAPE
168	X1819168	HEX BOLT M6-1 X 12
169	X1819169	BUTTON HD CAP SCR M58 X 16
170	X1819170	LOCK WASHER 5MM
171	X1819171	FLAT WASHER 5MM
172	X1819172	PUSH STICK
173	X1819173	UPPER HINGE BLOCK
174	X1819174	FLAT WASHER 5MM
175	X1819175	LOCK WASHER 5MM
176	X1819176	BUTTON HD CAP SCR M58 X 12
177	X1819177	LOWER HINGE BLOCK
178	X1819178	ARBOR WRENCH 27MM COMBO
179	X1819179	ARBOR WRENCH 22 X 24MM OPEN-ENDS



### **Trunnion**





### **Trunnion Parts List**

REF	PART #	DESCRIPTION
201	X1819201	HANDWHEEL LOCK KNOB
202	X1819202	HANDWHEEL HANDLE
202-1	X1819202-1	HANDWHEEL
203	X1819203	SET SCREW M58 X 12
204	X1819204	TILT POINTER PIVOT
205	X1819205	SET SCREW M58 X 6
206	X1819206	TILT POINTER
207	X1819207	CAP SCREW M6-1 X 12
208	X1819208	LOCK WASHER 6MM
209	X1819209	FLAT WASHER 6MM
210	X1819210	HEX NUT M6-1
211	X1819211	TILT POINTER BRACKET
212	X1819212	CAP SCREW M58 X 25
213	X1819213	TILT SHAFT BRACKET
214	X1819214	CAP SCREW M8-1.25 X 25
215	X1819215	LOCK WASHER 8MM
216	X1819216	SHAFT PIN
217	X1819217	KEY 5 X 5 X 36
218	X1819218	TILT SHAFT
219	X1819219	LOCK COLLAR
220	X1819220	SET SCREW M6-1 X 8
221	X1819221	LOCK WASHER 18MM
222	X1819222	COPPER WASHER 18MM
223	X1819223	WORM
224	X1819224	SET SCREW M6-1 X 10
225	X1819225	FRONT TRUNNION
226	X1819226	CAP SCREW M10-1.5 X 30
227	X1819227	FLAT WASHER 10MM
228	X1819228	LOCK WASHER 10MM
229	X1819229	HEX NUT M10-1.5
230	X1819230	BELT SPZ 625
231	X1819231	MOTOR PULLEY
232	X1819232	SET SCREW M58 X 12
233	X1819233	KEY 5 X 5 X 30
234	X1819234	MOTOR 3HP 220V 1PH
234-1	X1819234-1	MOTOR FAN COVER
234-2	X1819234-2	MOTOR FAN
234-3	X1819234-3	R CAPACITOR 25M 370V 1-3/4 X 3
234-4	X1819234-4	R CAPACITOR COVER
234-5	X1819234-5	S CAP 200M 250V 1-1/4 X 2-3/4
234-6	X1819234-6	S CAPACITOR COVER
234-7	X1819234-7	MOTOR JUNCTION BOX
235	X1819235	ORIENTATION PIN
236	X1819236	ROLL PIN 4 X 28
237	X1819237	HEX BOLT M12-1.75 X 100
238	X1819238	FLAT WASHER 12MM
239	X1819239	LOCK WASHER 12MM

REF	PART #	DESCRIPTION
240	X1819240	HEX NUT M12-1.75
241	X1819241	MOTOR FRAME SUPPORT
242	X1819242	SET SCREW M8-1.25 X 12
243	X1819243	SET SCREW M8-1.25 X 30
244	X1819244	HEX NUT M8-1.25
245	X1819245	ELEVATION SHAFT
246	X1819246	LOCK NUT M18-1.5
252	X1819252	HEX BOLT M8-1.25 X 20
253	X1819253	HEX NUT M8-1.25
254	X1819254	HEX BOLT M8-1.25 X 35
255	X1819255	SHAFT SLEEVE
	X1819257	SET SCREW M8-1.25 X 8
258	X1819258	COMPRESSION SPRING
259	X1819259	STEEL BALL 8MM
263	X1819263	REAR TRUNNION
264	X1819264	SPACER
265	X1819265	CAP SCREW M8-1.25 X 30
266	X1819266	FLAT WASHER 8MM
	X1819267	LOCK WASHER 8MM
268	X1819268	HEX NUT M8-1.25
269	X1819269	PIVOT SHAFT
	X1819270	KEY 6 X 6 X 50
271	X1819271	PIVOT BRACKET
	X1819272	HEX BOLT M10-1.5 X 45
273	X1819273	LOCK WASHER 10MM
274	X1819274	FLAT WASHER 10MM
275	X1819275	ARBOR NUT
276	X1819276	ARBOR FLANGE
277	X1819277	BLADE 10" 40TPI 5/8" BORE
278	X1819278	BLADE ARBOR
279	X1819279	KEY 5 X 5 X 30
280	X1819280	BALL BEARING 6005ZZ
281	X1819281	FRONT PULLEY SPACER
282	X1819282	ARBOR PULLEY
283	X1819283	REAR PULLEY SPACER
284	X1819284	FLANGE RING
285	X1819285	PHLP HD SCR M58 X 12
286	X1819286	LOCK WASHER 5MM
287	X1819287	FLAT WASHER 5MM
288	X1819288	LOCK NUT M16-1.5
295	X1819295	REAR TRUNNION BRACKET
296	X1819296	FRONT TRUNNION BRACKET
297	X1819297	CAP SCREW M8-1.25 X 30
298	X1819298	FLAT WASHER 8MM
299	X1819299	LOCK WASHER 8MM
300	X1819300	HEX NUT M8-1.25
200	1,1101,7000	p.12.7.1101 /110 11.23



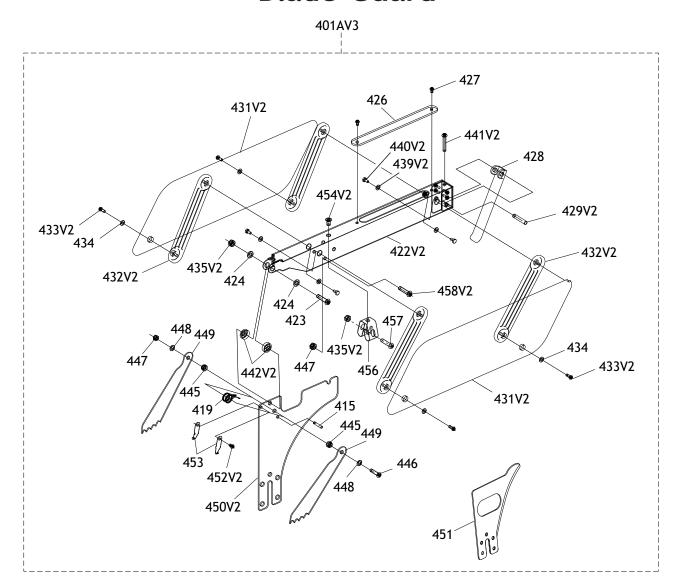
### **Trunnion Parts List**

REF	PART #	DESCRIPTION
301	X1819301	BULL GEAR
302V2	X1819302V2	SPLITTER ADJUSTMENT BLOCK V2.10.15
304	X1819304	LOCK WASHER 6MM
305V2	X1819305V2	HEX BOLT M6-1 X 30 V2.10.15
306	X1819306	SET SCREW M6-1 X 12
307V2	X1819307V2	SPLITTER TIGHTENING CLIP V2.10.15
310	X1819310	ORIENTATION PLATE
311	X1819311	ROLL PIN 5 X 25
313	X1819313	LOCK WASHER 5MM
314	X1819314	CAP SCREW M58 X 25
315	X1819315	GEAR
316	X1819316	CAP SCREW M10-1.5 X 40
317	X1819317	FLAT WASHER 10MM
318	X1819318	LOCK NUT M10-1.5

PART #	DESCRIPTION
X1819319	GEAR BUSHING
X1819320	PLATE GEAR
X1819321	SET SCREW M6-1 X 20
X1819322	HEX NUT M6-1
X1819323	FENDER WASHER 10MM
X1819324	FLAT WASHER 8MM
X1819325	LOCK WASHER 8MM
X1819326	CAP SCREW M8-1.25 X 20
X1819330V2	SPACER V2.10.15
X1819334	MAIN TRUNNION
X1819335	PIN KNOB
X1819336	COMPRESSION SPRING
X1819337	POSITION PIN SET
	X1819319 X1819320 X1819321 X1819322 X1819323 X1819324 X1819325 X1819326 X1819330V2 X1819334 X1819335 X1819336



### **Blade Guard**

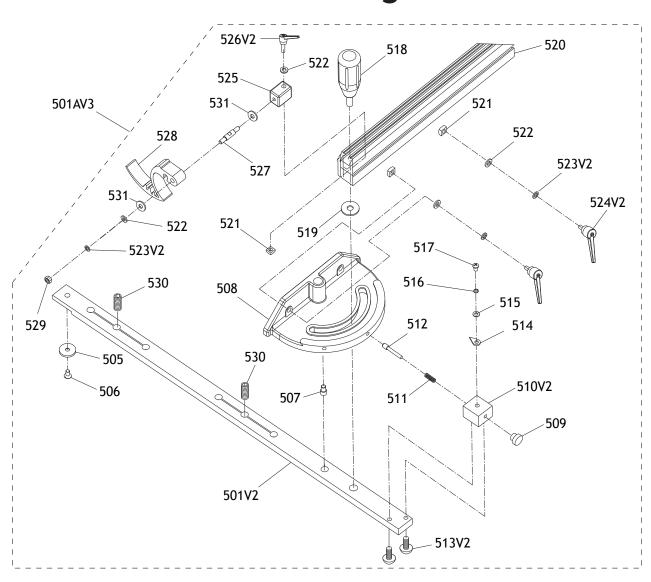


REF	PART #	DESCRIPTION
401AV3	X1819401AV3	BLADE GUARD ASSEMBLY V3.02.11
415	XPRP39M	ROLL PIN 4 X 20
419	X1819419	TORSION SPRING
422V2	X1819422V2	SUPPORT ARM V2.10.10
423	XPS47M	PHLP HD SCR M6-1 X 25
424	XPW03M	FLAT WASHER 6MM
426	X1819426	TOP GUARD PLASTIC
427	XPS17M	PHLP HD SCR M47 X 6
428	X1819428	FRONT GUARD PLASTIC
429V2	X1819429V2	ROLL PIN 6 X 32
431V2	X1819431V2	SIDE GUARD PLASTIC V2.10.10
432V2	X1819432V2	GUARD SWING ARM V2.10.10
433V2	XPS38M	PHLP HD SCR M47 X 10
434	XPW02M	FLAT WASHER 5MM
435V2	XPLN03M	LOCK NUT M6-1
439V2	XPW02M	FLAT WASHER 5MM

REF	PART #	DESCRIPTION	
440V2	XPB122M	HEX BOLT M47 X 8	
441V2	XPS62M	PHLP HD SCR M6-1 X 30	
442V2	X1819442V2	GUARD SPACER V2.10.10	
445	X1819445	PAWL SPACER	
446	XPB42M	HEX BOLT M58 X 20	
447	XPLN02M	LOCK NUT M58	
448	XPW02M	FLAT WASHER 5MM	
449	X1819449	PAWL	
450V2	X1819450V2	SPREADER V2.10.10	
451	X1819451	RIVING KNIFE	
452V2	X1819452V2	RIVET V2.02.11	
453	X1819453	PAWL HOOK 2-PC	
454V2	X1819454V2	RIVET 5 X 12MM V2.02.11	
456	X1819456	GUARD CLAMP	
457	XPS531M	PHLP HD SCR M6-1 X 35	
458V2	XPB11M	HEX BOLT M58 X 8	



# Miter Gauge

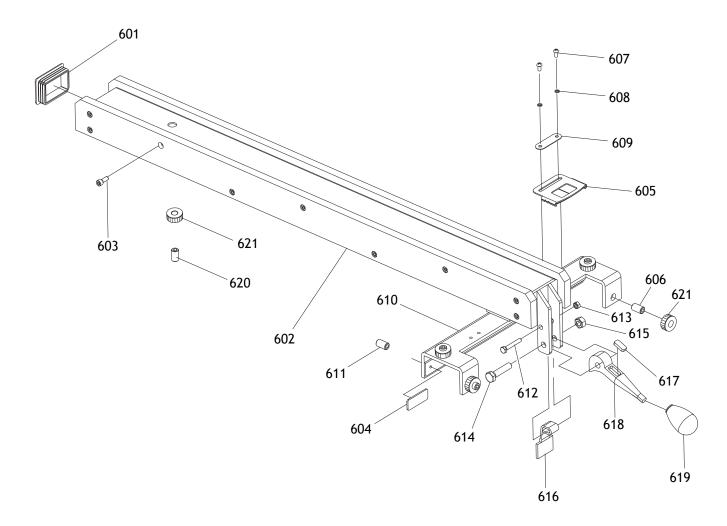


REF	PART #	DESCRIPTION
501AV3	X1819501AV3	MITER GAUGE ASSEMBLY V3.10.15
501V2	X1819501V2	MITER BAR V2.10.15
505	X1819505	T-SLOT WASHER
506	X1819506	FLAT HD SCR M58 X 8
507	X1819507	MITER BODY PIVOT PIN
508	X1819508	MITER GUAGE BODY
509	X1819509	STOP PIN KNOB
510V2	X1819510V2	STOP PIN BLOCK V2.10.15
511	X1819511	COMPRESSION SPRING
512	X1819512	STOP PIN
513V2	X1819513V2	BUTTON HD CAP SCR M47 X 10 V2.10.15
514	X1819514	POINTER
515	X1819515	FLAT WASHER 4MM
516	X1819516	LOCK WASHER 4MM
517	X1819517	PHLP HD SCR M47 X 8

REF	PART #	DESCRIPTION
518	X1819518	MITER KNOB
519	X1819519	FENDER WASHER 8MM
520	X1819520	MITER GAUGE FENCE
521	X1819521	T-NUT M6-1
522	X1819522	FLAT WASHER 6MM
523V2	X1819523V2	PLASTIC WASHER 6MM
524V2	X1819524V2	LOCK LEVER M6-1 X 25 V2.12.10
525	X1819525	FLIP STOP BRACKET
526V2	X1819526V2	LOCK LEVER M6-1 X 32 V2.12.10
527	X1819527	FLIP STOP PIVOT SHAFT
528	X1819528	FLIP STOP
529	X1819529	LOCK NUT M6-1
530	X1819530	SET SCREW M8-1.25 X 6
531	X1819531	TEFLON WASHER



### **Fence**

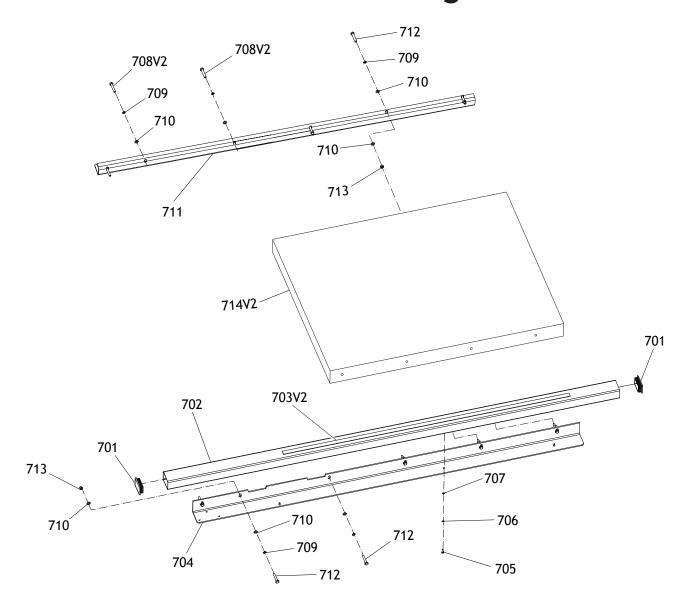


REF	PART #	DESCRIPTION
601	X1819601	FENCE END CAP
602	X1819602	FENCE FACE
603	X1819603	CAP SCREW M6-1 X 16
604	X1819604	GLIDE PAD
605	X1819605	FENCE SCALE WINDOW
606	X1819606	BRASS GLIDE SCREW M12-1.75 X 16
607	X1819607	PHLP HD SCR M58 X 10
608	X1819608	LOCK WASHER 5MM
609	X1819609	SCALE INDICATOR
610	X1819610	FENCE BODY
611	X1819611	ALIGNMENT SET SCREW

REF	PART #	DESCRIPTION	
612	X1819612	HEX BOLT M6-1 X 40	
613	X1819613	LOCK NUT M6-1	
614	X1819614	HEX BOLT M10-1.5 X 45	
615	X1819615	LOCK NUT M10-1.5	
616	X1819616	LOCK FOOT	
617	X1819617	MAGNET	
618	X1819618	FENCE LOCK LEVER	
619	X1819619	FENCE LOCK KNOB	
620	X1819620	BRASS GLIDE SCREW M12-1.75 X 30	
621	X1819621	KNURLED KNOB M12-1.75	



# W1819 Extension Wing & Rails

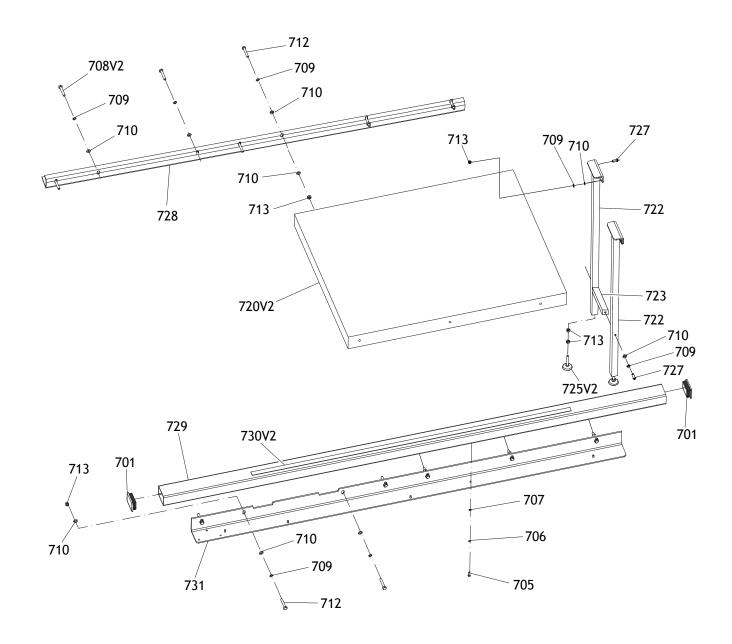


REF	PART #	DESCRIPTION
-	X1819701	GUIDE TUBE END CAP
702	X1819702	GUIDE TUBE
703V2	X1819703V2	FENCE SCALE V2.09.11
	X1819704	FRONT RAIL
705	X1819705	CAP SCREW M6-1 X 16
	X1819706	LOCK WASHER 6MM
707	X1819707	FLAT WASHER 6MM

REF	PART #	DESCRIPTION
708V2	X1819708V2	HEX BOLT 5/16-18 X 1 V2.10.15
	X1819709	LOCK WASHER 8MM
710	X1819710	FLAT WASHER 8MM
	X1819711	REAR RAIL
712	X1819712	HEX BOLT M8-1.25 X 40
713	X1819713	HEX NUT M8-1.25
714V2	X1819714V2	EXTENSION WING V2.10.15



# W1820 Extension Wing & Rails



REF	PART #	DESCRIPTION
701	X1820701	GUIDE TUBE END CAP
705	X1820705	CAP SCREW M6-1 X 16
706	X1820706	LOCK WASHER 6MM
707	X1820707	FLAT WASHER 6MM
708V2	X1820708V2	HEX BOLT 5/16-18 X 1 V2.10.15
709	X1820709	LOCK WASHER 8MM
710	X1820710	FLAT WASHER 8MM
712	X1820712	HEX BOLT M8-1.25 X 40
713	X1820713	HEX NUT M8-1.25

REF	PART #	DESCRIPTION	
720V2	X1820720V2	EXTENSION WING V2.10.15	
722	X1820722	LEG	
723	X1820723	LEG CROSS BAR	
725V2	X1820725V2	FOOT V2.10.15	
727	X1820727	BUTTON HD CAP SCR M8-1.25 X 40	
728	X1820728	REAR RAIL	
729	X1820729	GUIDE TUBE	
730V2	X1820730V2	FENCE SCALE V2.09.11	
731	X1820731	FRONT RAIL	



#### **Machine Labels**

### **AWARNING**

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



REF	PART #	DESCRIPTION	
801	X1819801	ELECTRICITY LABEL	
802	X1819802	TABLE SAW PRECAUTIONS LABEL	
803	X1819803	BLADE GUARD WARNING LABEL	
804	X1819804	RIP FENCE LABEL	
805	X1819805	EYE INJURY HAZARD LABEL	
806	X1819806	SHOP FOX NAMEPLATE	

REF	PART #	DESCRIPTION
807	X1819807	MODEL NUMBER LABEL W1819
807	X1820807	MODEL NUMBER LABEL W1820
808	X1819808	MACHINE ID LABEL W1819
808	X1820808	MACHINE ID LABEL W1820
809	X1819809	DISCONNECT POWER LABEL
810	X1819810	MOTOR COVER WARNING LABEL
	-	







# **Warranty Registration**

Nan	ne			
	eet			
			Zip	
			Invoice #	
Mod	del #Serial #	Dealer Name	Purchase Date	
		on a voluntary basis. It will be used jes. <b>Of course, all information is str</b>		
1.	How did you learn about us?AdvertisementMail Order Catalog	Friend	Local Store Other:	
2.	How long have you been a w 0-2 Years	voodworker/metalworker? 2-8 Years8-20 Ye	ears20+ Years	
3.	How many of your machines	·	10+	
4.	Do you think your machine r	epresents a good value?	Yes No	
5.	Would you recommend Shop	d you recommend Shop Fox products to a friend? Yes No		
6.	What is your age group? 20-29 50-59	30-39 60-69	40-49 70+	
7.	What is your annual househousehousehousehousehousehousehouse	\$30,000-\$39,000	\$40,000-\$49,000 \$70,000+	
8.	Which of the following maga	azines do you subscribe to?		
	Cabinet Maker Family Handyman Hand Loader Handy Home Shop Machinist Journal of Light Cont. Live Steam Model Airplane News Modeltec Old House Journal	Popular Mechanics Popular Science Popular Woodworking Practical Homeowner Precision Shooter Projects in Metal RC Modeler Rifle Shop Notes Shotgun News	Today's Homeowner Wood Wooden Boat Woodshop News Woodsmith Woodwork Woodworker West Woodworker's Journal Other:	
9.	Comments:			
_				
_				

FOLD ALONG DOTTED LINE		 
	<del>-</del> -	Place Stamp Here
	SHOP FOX	
	WOODSTOCK INTERNATIONAL INC. P.O. BOX 2309 BELLINGHAM, WA 98227-2309	
		 ul

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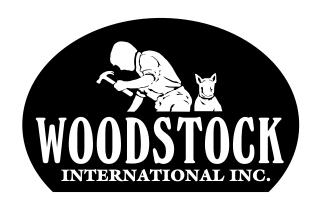
#### WARRANTY

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, replace, or arrange for a dealer refund at its expense and at its option, the Shop Fox machine or machine part, which in proper and intended use has proven to be defective, provided that the original owner returns the product prepaid to an authorized warranty or repair facility as designated by our Bellingham, Washington 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, acts or electrical codes. We do not reimburse for third party repairs. In no event shall Woodstock International, Inc.'s liability under this limited 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.



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