INSTRUCTION MANUAL

Original Instructions

Tilting Arbor Table Saw

ITEM # 25101
25103

⚠ WARNING!

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

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

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

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

⚠ WARNING!

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

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

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

Contents

MACHINEN SPECIFICATIONS

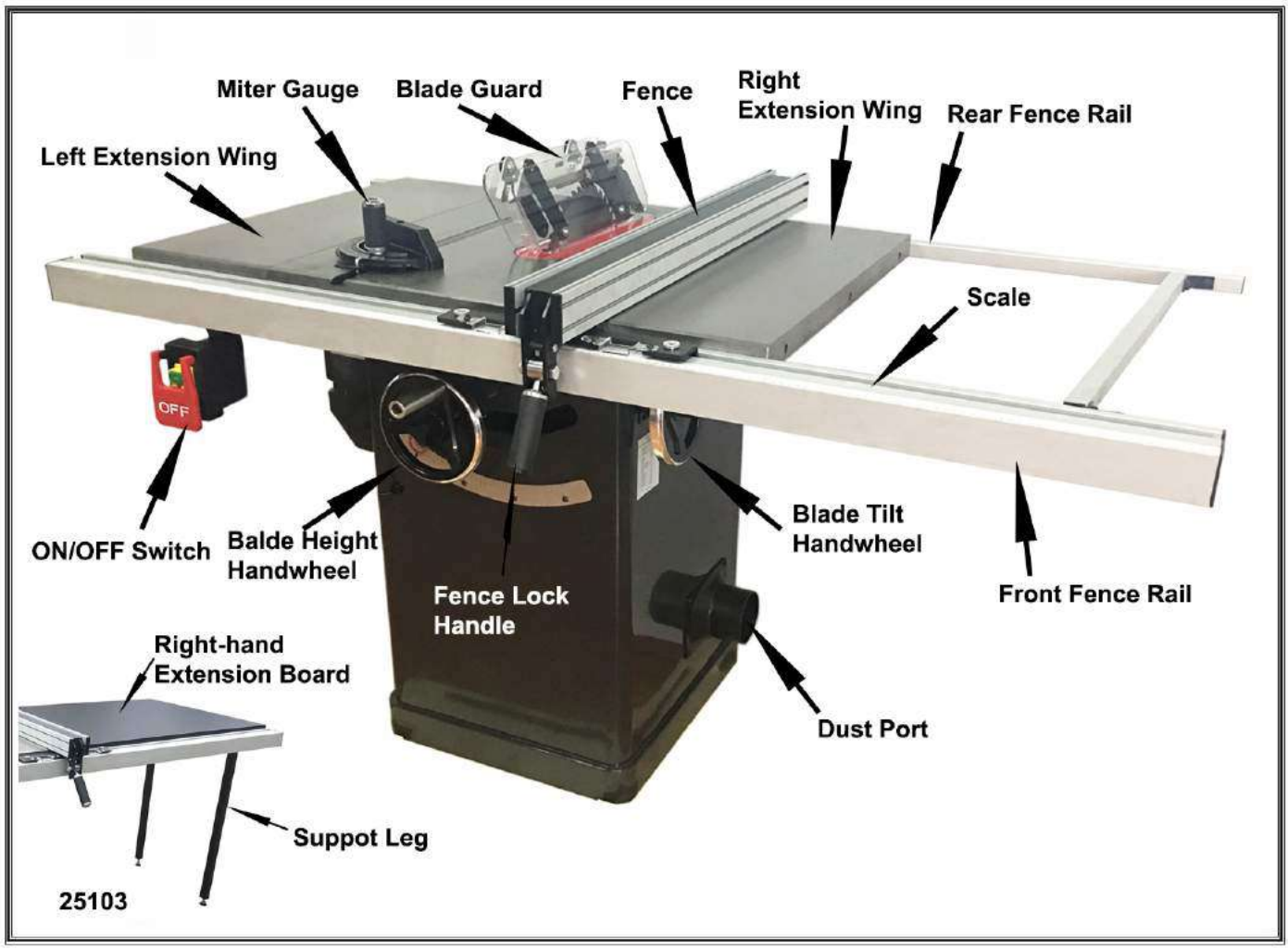
MODEL 25101 / 25103

10" 2HP CABINET TABLE SAW

- Voltage required: 220V, single-phase
- Motor power: 2 HP
- Full-load current rating: 7.5A
- Min. circuit size: 15A
- Switch type: ON/OFF push button w/ big stop pedal
- Precision-ground cast iron table: 508mm x 687mm
- Steel extension wings (2): 254mm x687mm
- Table height: 900mm
- Arbor: 5/8" (15.88mm)
- Arbor speed: 3450 RPM
- Blade included.: dia. 254mm, 40T
- Blade tilts: 0 - 45°, left
- Max. depth of cut @ 90°: 82mm
- Max. depth of cut @ 45°: 58mm
- Rip right capacity (25101): 762mm
- Rip right capacity (25103): 1290mm
- Rip left capacity: 381mm
- Max. Dado width: 20mm
- Max. Dado dia.: 205mm
- Fence type: Camlock T-shape w/ aluminum face
- Fence size: 908mm(L) x80(W) x62mm(H)
- Rail type: Extruded aluminum
- Rail size: 1625mm(L) x80mm(W) x57mm(H)
- Miter gauge slot type: T-slot
- Miter gauge slot width: 3/4" (19.05mm)
- Miter gauge slot height: 3/8" (9.5mm)
- Standard insert: Yes
- Push stick: Yes
- Dust port size: 100mm
- Foot print: 534mm x495mm
- Overall size: 1455mm x 950mm x 910mm (25101)
  1983mm x 950mm x 910mm (25103)
- Machine weight: 130kgs (25101) / 150kgs (25103)

Identification

Become familiar with the names and locations of the controls and features shown below to better understand the instructions in this manual.



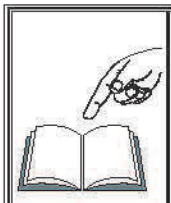
⚠CAUTION

For Your Own Safety Read Instruction Manual Before Operating Saw

a) Wear eye protection.
b) Use saw-blade guard and spreader for every operation for which it can be used, including all through sawing.
c) Keep hands out of the line of saw blade.
d) Use a push-stick when required.
e) Pay particular attention to instructions on reducing risk of kickback.
f) Do not perform any operation freehand.
g) Never reach around or over saw blade.

Controls & Components

Refer to **Figures 1-3** and the following descriptions to become familiar with the basic controls and components of this machine. Understanding these items and how they work will help you understand the rest of the manual and stay safe when operating this machine.



⚠WARNING

To reduce your risk of serious injury, read this entire manual BEFORE using machine.

A. START/STOP Switch: Starts and stops the motor. The switch can be disabled for safety by inserting the disabling pin or a padlock (not included) through the START button.

Note: *Paddle cover must be lifted to access* ***ON*** *switch.*

Figure 1. Location of START/STOP switch.

B. Handwheel Locks: Lock blade height and angle when tightened (one on each handwheel).

C. Blade Height Handwheel: Adjusts blade height from 0"-3¼".

D. Blade Tilt Handwheel: Adjusts angle of blade tilt from 90°-45°.

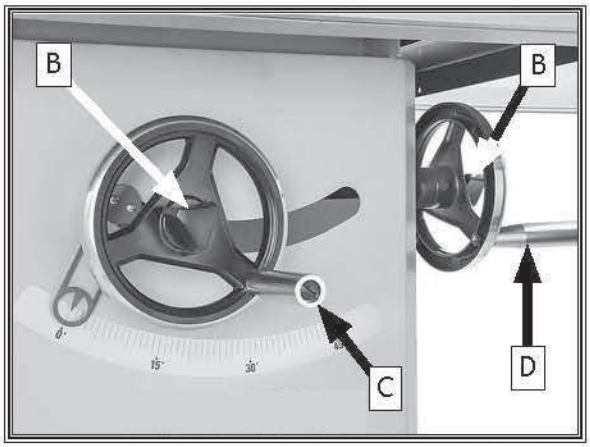


Figure 2. Blade adjustment handwheels and locks.

E. Fence Lock: Locks fence when pushed down, and unlocks fence when pulled up.

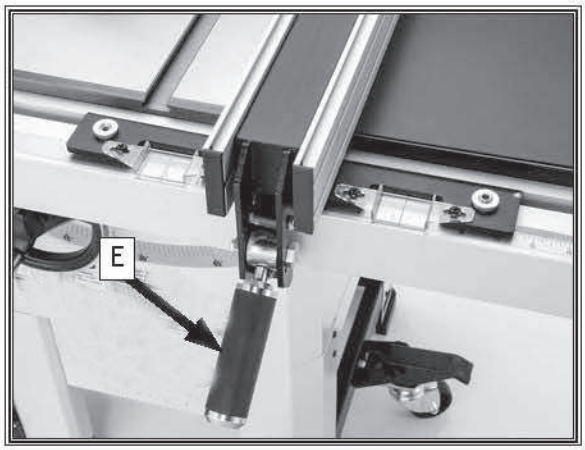


Figure 3. Fence lock handle.

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!

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

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

⚠CAUTION — **Indicates a potentially hazardous situation which, if not avoided, MAY result in minor or moderate injury.**

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

DISCONNECT 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.

GUARDS & COVERS. Guards and covers reduce accidental contact with moving parts or flying debris—make sure they are properly installed, undamaged, and working correctly.

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.

EXPERIENCING DIFFICULTIES. If at any time you experience difficulties performing the intended operation, stop using the machine!

Additional Safety for Table Saws

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, or under blade guard when blade is spinning.

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. Do not use fence while using miter gauge.

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, laminatecovered 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 using with dado blade smaller than 10" in diameter. 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 parts of your body.
- Never, for any reason, place your hand behind the blade. Should kickback occur, your hand will 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 your hand would have received.
- Use featherboards or anti-kickback devices to assist with feeding and prevent or slow down kickback.

⚠CAUTION

Statistics show that most common accidents among table saw users can be linked to kickback. Kickback is typically defined as the high-speed expulsion 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 kickback.

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 at 220V ..... **7.5 Amps**

Circuit Requirements for 220V

This machine can be converted to operate on a power supply circuit that has a verified ground and meets the requirements listed below. (Refer to **Voltage Conversion** instructions for details.)

Circuit Type .....**220V/240V, Single-Phase**
Circuit Size ..... **15 Amps**
Plug/Receptacle ..... **NEMA 6-15**

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.

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.

⚠WARNING

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

⚠WARNING

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.

SETUP

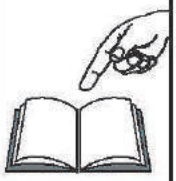
Unpacking

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

Items Needed for Setup

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

Description	Qty
• Additional People	1
• Safety Glasses for Each Person	1
• Cleaner/Degreaser	As Needed
• Disposable Shop Rags	As Needed
• Straightedge 4'	1
• Wrenches or Sockets 13mm	2
• Phillips Head Screwdriver #2	1
• Flat Head Screwdriver #2	1
• Hex Wrench 8mm	1
• Dust Collection System	1
• Dust Hose 4"	1
• Hose Clamps 4"	2



⚠WARNING

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!

⚠WARNING

Wear safety glasses during entire setup process!

⚠WARNING

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

Inventory

The following is a list of items shipped with your machine. Before beginning setup, lay these items out and inventory them.

Note: *If you cannot find an item on this list, carefully check around/inside the machine and packaging materials. Often, these items get lost in packaging materials while unpacking or they are pre-installed at the factory.*

Box 1 Contents (Figure 8)	Qty
A. Saw Body (Not Shown)	1
B. Extension Wings	2
C. Saw Blade 10" x 40T	1
E. Table Insert	1
F. Front Fence Rail	1
G. Rear Fence Rail	1 Ea.

Box 2 Contents (Figure 9)	Qty
H. Fence Assembly	1
I. Blade Guard Assembly	1
J. Push Stick	1
K. Miter Gauge	1
L. Spreader/Riving Knife	1
M. Fence Rail Brace	1
N. Wrench 23mm Closed, 22mm Open	1 Ea
O. Hex Wrenches 2.5, 3, 4, 5, 6, 8mm	1 Ea
P. Star Knobs	2
Q. Motor Cover	1
R. Access Panel	1
S. Handwheels	2

Box 3 Contents (Figure 10)	Qty
T. Right-Hand Extension Board	1
U. Support Legs	2

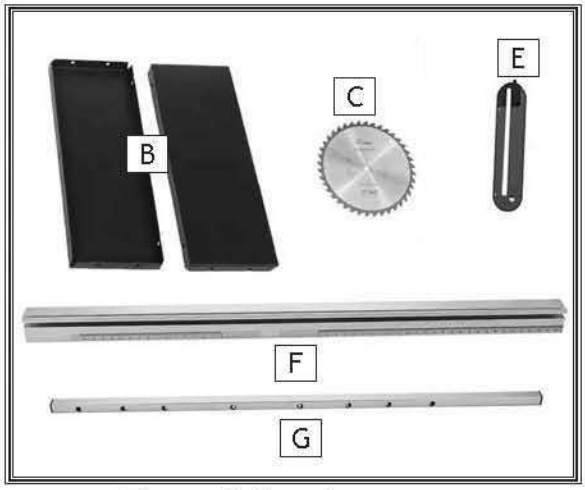


Figure 8. Box 1 contents.

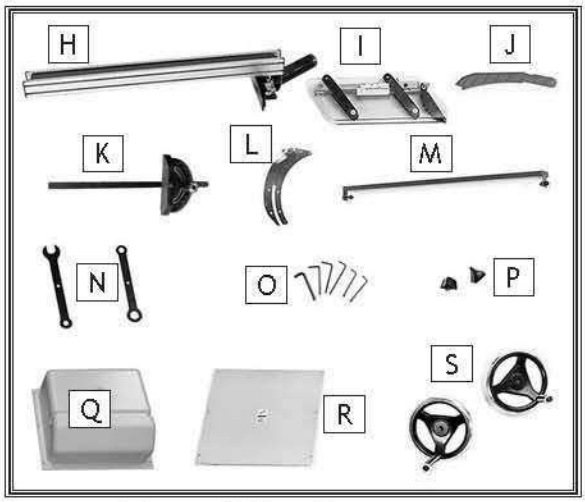


Figure 9. Box 2 contents.

Figure 10. Box 3 contents.

Cleaning Machine

To prevent corrosion during shipment and storage of your machine, the factory has coated the bare metal surfaces of your machine with a heavy-duty rust prevention compound.

If you are unprepared or impatient, this compound can be difficult to remove. To ensure that the removal of this coating is as easy as possible, please gather the correct cleaner, lubricant, and tools listed below:

- Cleaner/degreaser designed to remove storage wax and grease
- Safety glasses & disposable gloves
- Solvent brush or paint brush
- Disposable Rags

To remove rust preventative coating, do these steps:

1. DISCONNECT MACHINE FROM POWER!

2. Put on safety glasses and disposable gloves.

3. Coat the rust preventative with a liberal amount of cleaner/degreaser, then let it soak for 5-10 minutes.

4. Wipe off surfaces. If your cleaner/degreaser is effective, the coating will wipe off easily.

   Tip: *An easier way to clean off thick coats of rust preventative from flat surfaces is to use a PLASTIC paint scraper to scrape off the majority of the coating before wiping it off with your rag. (Do not use a metal scraper or you may scratch your machine.)*

5. Repeat cleaning steps as necessary until all of the compound is removed.

6. To prevent rust on freshly cleaned surfaces, immediately coat with a quality metal protectant.

⚠WARNING

Gasoline and petroleum products have low flash points and can explode or cause fire if used to clean machinery. Avoid using these products to clean machinery. Many cleaning solvents are toxic if inhaled. Minimize your risk by only using these products in a well ventilated area.

NOTICE

In a pinch, automotive degreasers, mineral spirits or WD•40 can be used to remove rust preventative coating. Before using these products, though, test them on an inconspicuous area of your paint to make sure they will not damage it.

Machine Placement

Weight Load

Refer to the **Machine Specifications** for the weight of your machine. Make sure that the surface upon which the machine is placed will bear the weight of the machine, additional equipment that may be installed on the machine, and the heaviest workpiece that will be used. Additionally, consider the weight of the operator and any dynamic loading that may occur when operating the machine.

Space Allocation

Consider the largest size of workpiece that will be processed through this machine and provide enough space around the machine for adequate operator material handling or the installation of auxiliary equipment. With permanent installations, leave enough space around the machine to open or remove doors/ covers as required by the maintenance and service described in this manual. **See below for required space allocation.**

⚠CAUTION

Children or untrained people may be seriously injured by this machine. Only install in an access restricted location.

Physical Environment

The physical environment where your machine is operated is important for safe operation and the longevity of its components. For best results, operate this machine in a dry environment that is free from excessive moisture, hazardous chemicals, airborne abrasives, or extreme conditions. Extreme conditions for this type of machinery are generally those where the ambient temperature range exceeds 41°-104°F; the relative humidity range exceeds 20-95% (non-condensing); or the environment is subject to vibration, shocks, or bumps.

Electrical Installation

Place this machine near an existing power source. Make sure all power cords are protected from traffic, material handling, moisture, chemicals, or other hazards. Make sure to leave access to a means of disconnecting the power source or engaging a lockout/tagout device.

Lighting

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

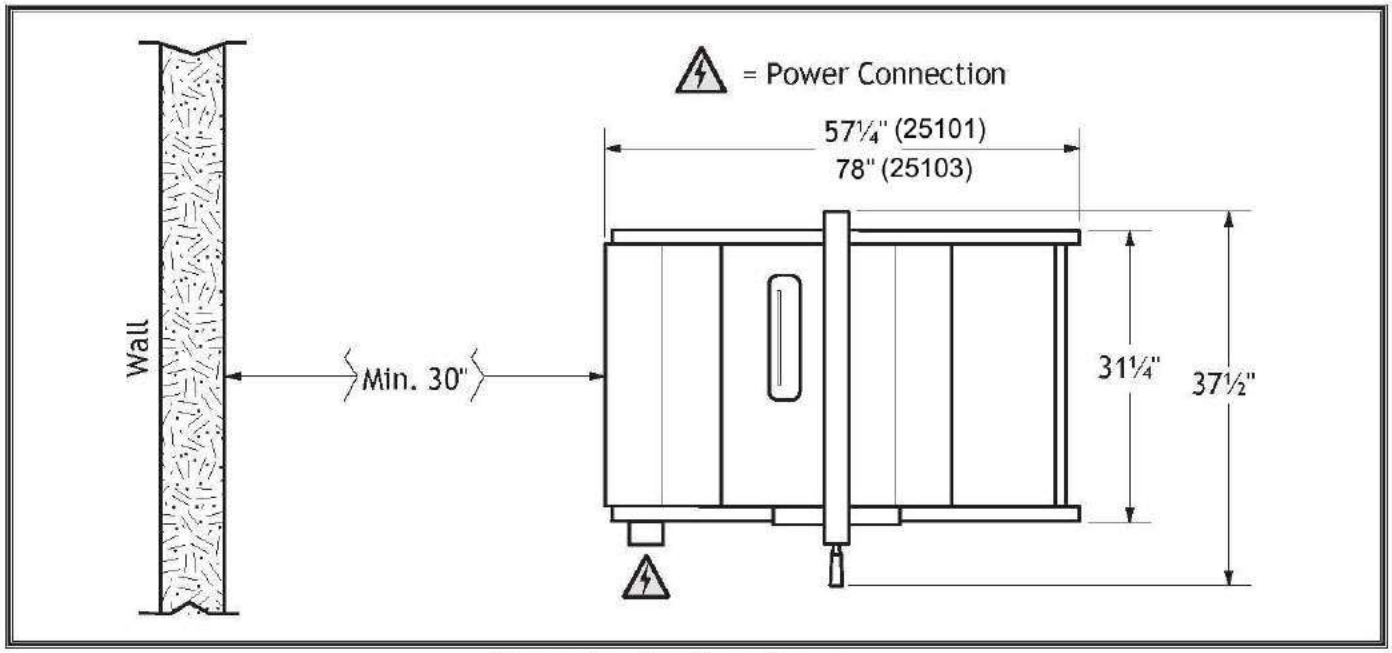


Figure 11. Working clearances.

Assembly

Before beginning the assembly process, refer to **Items Needed for Setup** and gather everything you need. Ensure all parts have been properly cleaned of any heavy-duty rust-preventative applied at the factory (if applicable). Be sure to complete all steps in the assembly procedure prior to performing the **Test Run** or connecting the machine to power.

To assemble table saw, do these steps:

1. Install foot lever & bracket assemblies (see **Figure 12**) on right front and rear stand legs with pre-installed (2) M8-1.25 x 16 button head cap screws, (2) 8mm flat washers, (2) 8mm lock washers, and (2) M8-1.25 hex nuts.

2. Install caster on each lever and bracket assembly (see **Figure 13**) with (1) M8-1.25 x 65 hex bolt and (1) M8-1.25 lock nut.

3. Install leg brace (see **Figure 14**) with pre-installed (4) M8-1.25 x 16 button head cap screws and (4) M6-1 x 12 button head cap screws.

4. Install caster on leg brace mounting bracket with (1) M8-1.25 x 65 hex bolt and (1) M8-1.25 lock nut (see **Figure 15**).

Above steps (1, 2, 3, 4) are only available for 25103 Open-Stand table saw, cabinet table saws 25101&25103 don't have mobile wheels!

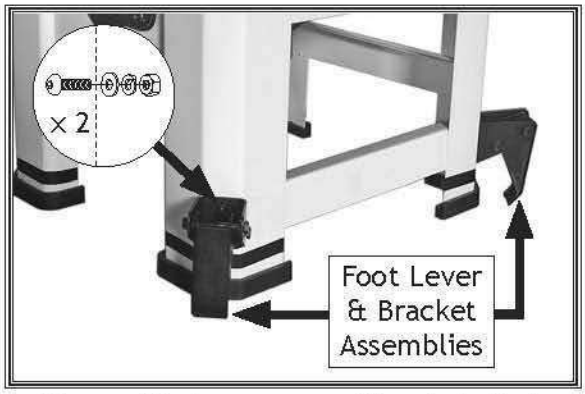


Figure 12. Lever assemblies installed.

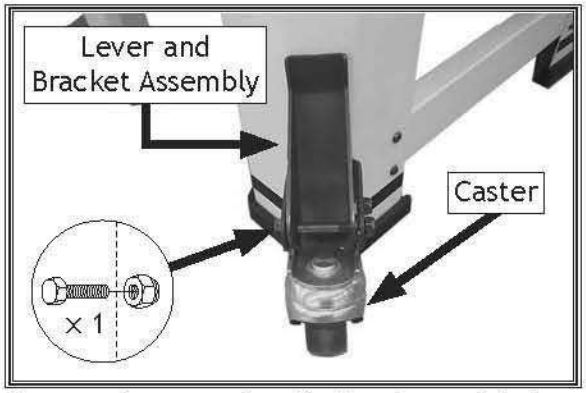


Figure 13. Caster installed on front right leg.

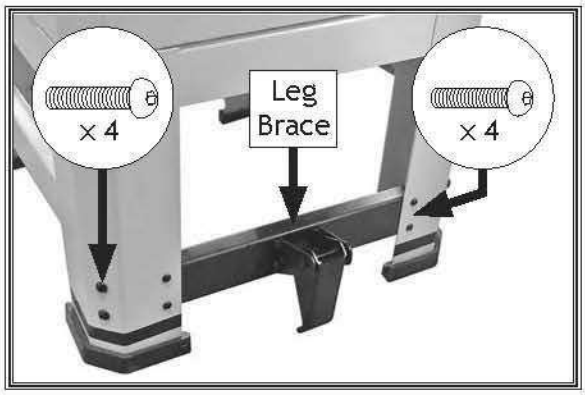


Figure 14. Leg brace installed.

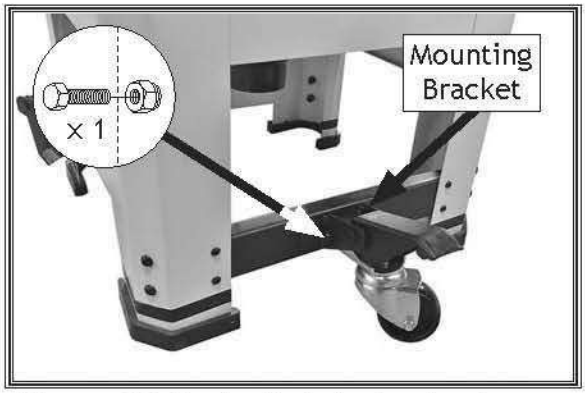


Figure 15. Caster installed on leg brace.

5. Install handwheels on shafts, making sure notch in each handwheel fits over pin on each shaft, as shown in **Figure 16**, and then secure with star knobs.

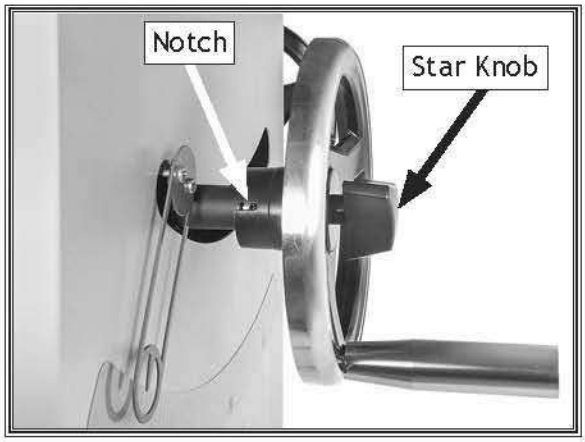


Figure 16. Handwheel properly installed.

6. Turn blade tilt handwheel until blade tilt indicator points to 15° on blade angle scale (see **Figure 17**).

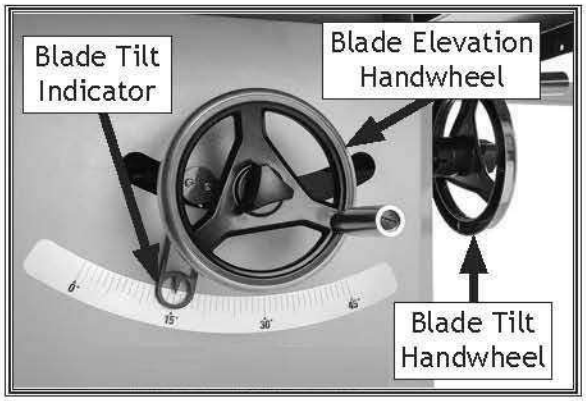


Figure 17. Blade tilt indicator and angle scale.

7. Inspect mating surfaces of cast iron table for burrs or foreign material that may inhibit installation of extension wings.

   Mating edges of table and wings must be clean, smooth, and flat. If necessary, use a wire brush or file to remove any flashing, dings, or high spots. This step will ensure that wings will mount properly to main table.

8. With another person to hold wings in place, attach each extension wing to main table using (3) M10-1.5 x 25 cap screws, (3) 10mm lock washers, and (3) 10mm flat washers (see **Figure 18**).

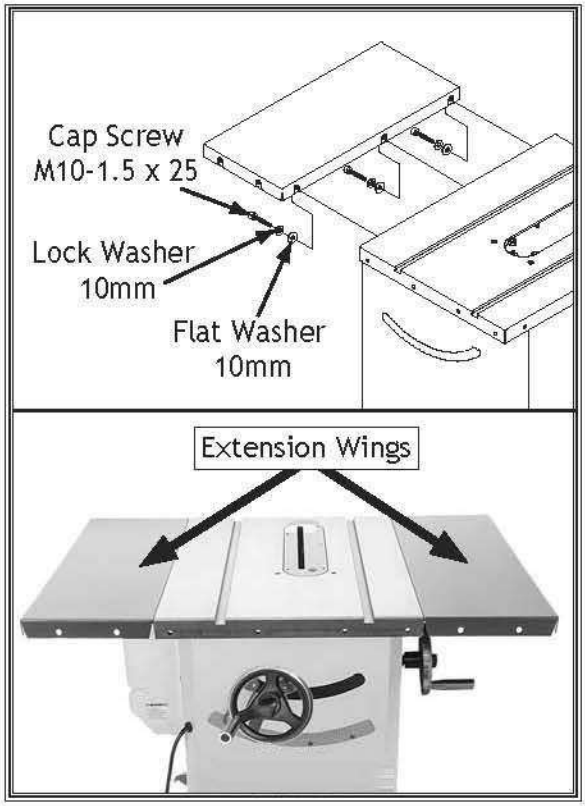


Figure 18. Extension wings installed.

9. Place straightedge across extension wings and main table to ensure combined table surface is flat.

— If combined table surface is flat, skip to next step.

— If outside end of extension wing tilts down, remove wing and place a strip of masking tape along bottom edge of main table to shim end of wing up (see **Figure 19**).

— If outside end of extension wing tilts up, remove wing and place a strip of masking tape along top edge of main table to shim end of extension wing down (see **Figure 20**).

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

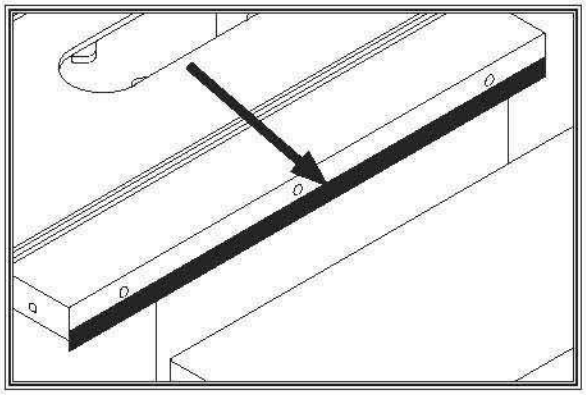


Figure 19. Masking tape location for tilting the extension wing up.

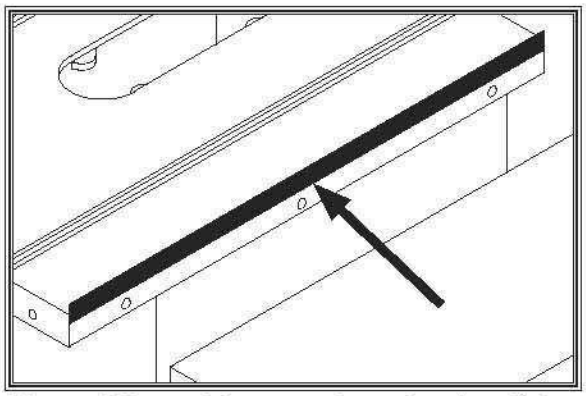


Figure 20. Masking tape location for tilting the extension wing down.

10. Remove (2) M8-1.25 x 16 hex bolts from switch, then remove tap screw and end cap from left end of fence rail. Insert hex bolts into bottom slot on left end of fence rail (see **Figure 21**). These bolts will be used later for mounting the switch.

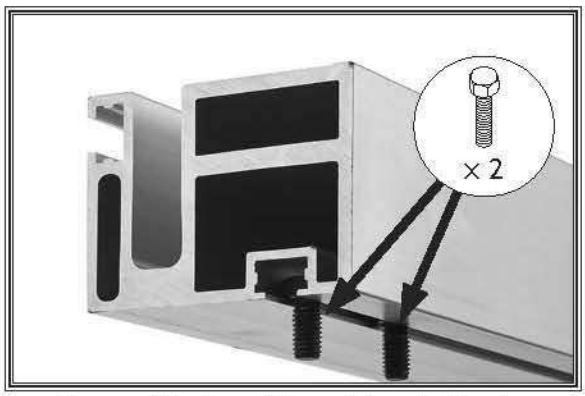


Figure 21. Location of hex bolts for mounting switch.

11. Re-install end cap and tap screw on fence rail (see **Figure 22**).

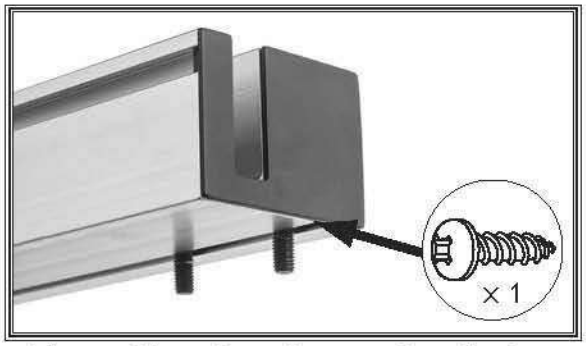


Figure 22. Left end cap re-installed on front fence rail.

12. Orient fence rail so scale faces you. Slide (8) M8-1.25 × 30 hex bolts into open slot (see **Figure 23**).

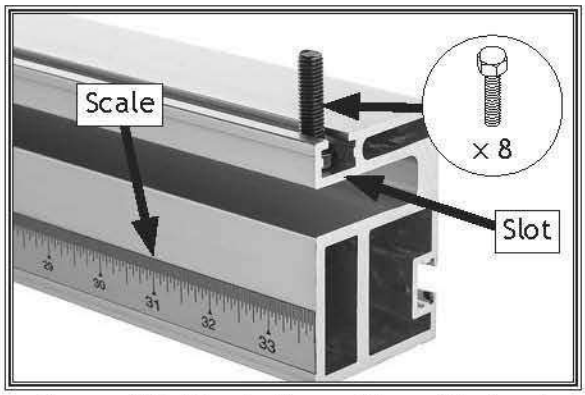


Figure 23. Hex bolt positioned in front fence rail slot.

13. Align hex bolts in fence rail with holes in table, then insert bolts into table. Be sure scale on fence rail is facing up. Hand tighten (8) M8-1.25 hex nuts onto hex bolts. Do not fully tighten yet (see **Figure 24**).

Figure 24. Mounting front fence rail.

14. Install switch on hex bolts from **Step 10** using (2) M8-1.25 hex nuts and (2) 8mm lock washers (see **Figure 25**).

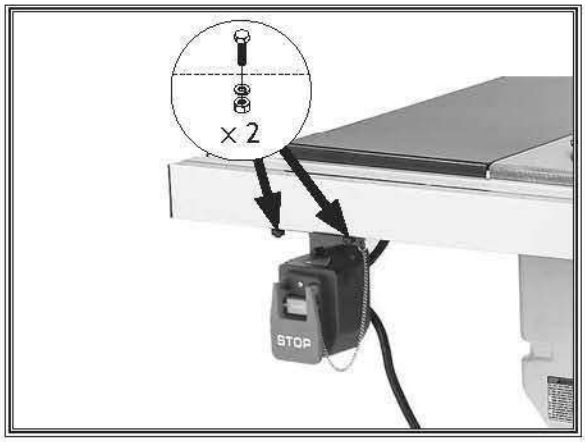


Figure 25. Switch installed.

15. Install rear fence rail on rear of table using (8) M8-1.25 × 25 cap screws, as shown in **Figure 26.** Secure outer four cap screws with M8-1.25 hex nuts.

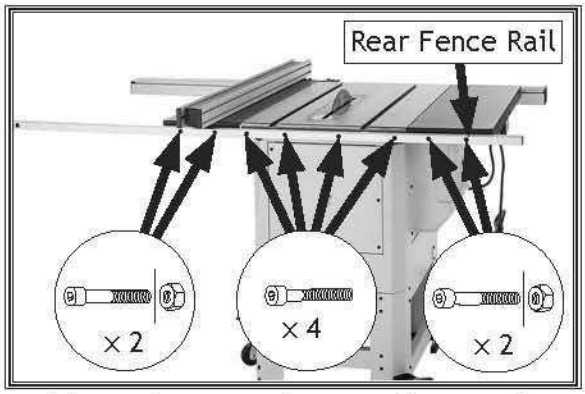


Figure 26. Mounting rear fence rail.

16. Install saw blade as instructed in **Blade Installation** on **Page 34.**

17. Install table insert in table opening (see **Figure 27**). Check to make sure it is flush and adjust if necessary (see **Table/Dado Insert Adjustment** on **Page 75** for more information).

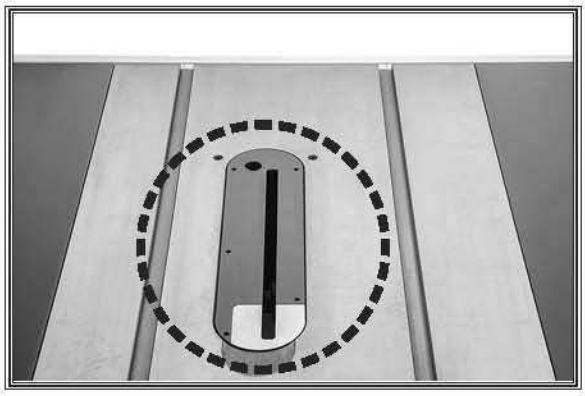


Figure 27. Standard table insert installed.

18. Place fence on front fence rail, as shown in **Figure 28**. Press handle down to lock fence in position.

19. Using blade height handwheel, raise blade 1-2 inches.

20. Turn blade tilt handwheel until blade tilt indicator on front of machine points to 0° on blade angle scale.

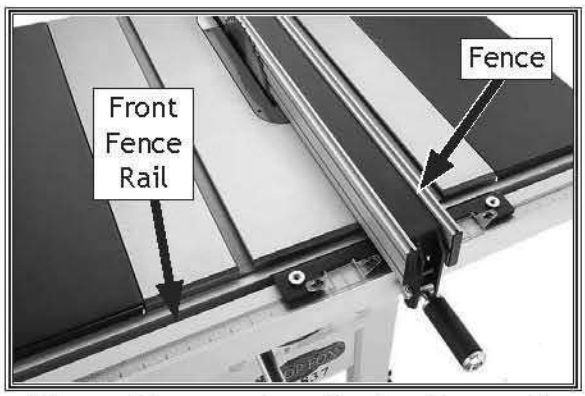


Figure 28. Fence installed on front rail.

21. Slide fence so it lightly touches right side of blade (see **Figure 29**). Do not yet lock fence.

22. Nudge fence rail so zero mark of scale (on right) lines up with cross-hair in fence scale window (see **Figure 29**).

23. Tighten hex nuts to secure both fence rails.

Figure 29. Fence scale calibration.

24. Check fence scale calibration by moving fence to 1" mark on scale and measuring distance between blade tooth (see **Figure 30**) and fence.

    —If crosshair aligns exactly with 1" mark, no adjustments need to be made.

    —If crosshair does *not* align with 1" mark, loosen fence scale window screws, move crosshair over 1" mark, then tighten screws.

25. Lift fence off of table and re-install to left of blade, then slide fence so it lightly touches left side of blade.

26. Check left fence scale window.

    —If crosshair aligns with zero mark on left fence scale, no adjustments need to be made.

    —If crosshair *does not* align with zero mark on scale, loosen fence scale window screws, move crosshair over zero mark, then tighten screws.

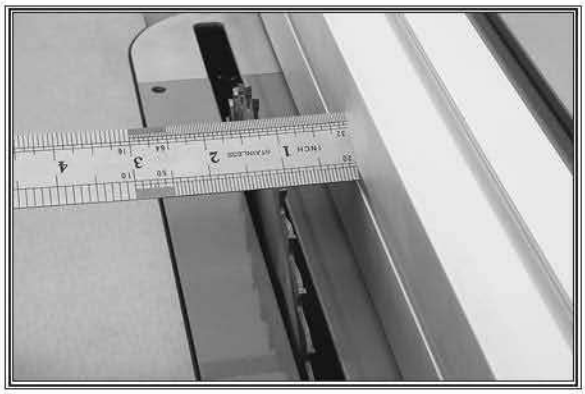


Figure 30. Checking calibration of fence scale.

27. Install blade guard as instructed on **Page 30**.

28. Using a helper, mount fence rail brace to rear fence rail with (1) M8-1.25 x 16 cap screw and (1) M8-1.25 hex nut (see **Figure 31**).

    Note: *Do not tighten cap screw yet.*

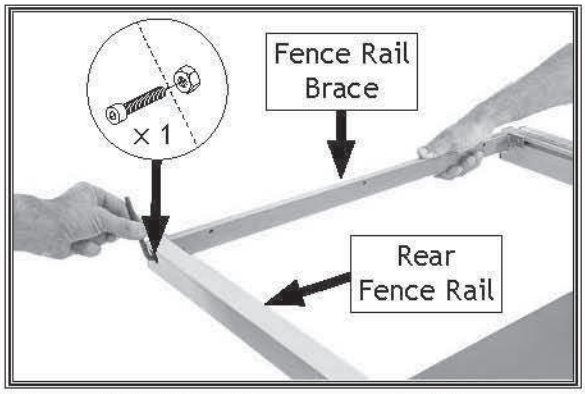


Figure 31. Attaching rear end of fence rail brace.

29. Insert (1) M8-1.25 x 16 hex bolt into front end of fence rail brace, then slide hex head and tab of brace into slot in front fence rail (see **Figure 32**). Tighten cap screw and hex nut on rear end of fence rail brace.

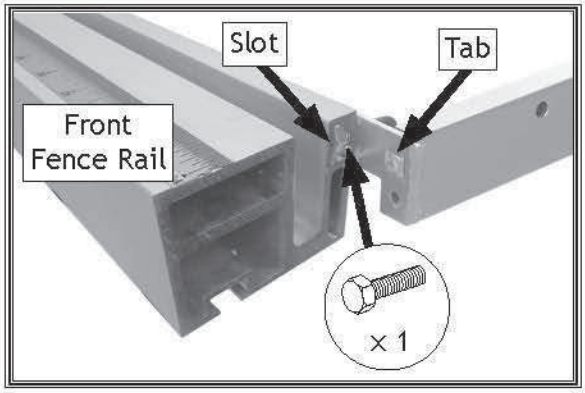


Figure 32. Attaching front end of fence rail brace.

30. Measure distance (A) from table edge to rear end of fence rail brace, then adjust front end of fence rail brace so it is the same distance (B) from table edge (see **Figure 33**).

31. Secure hex bolt on front of rail brace with (1) M8-1.25 hex nut.

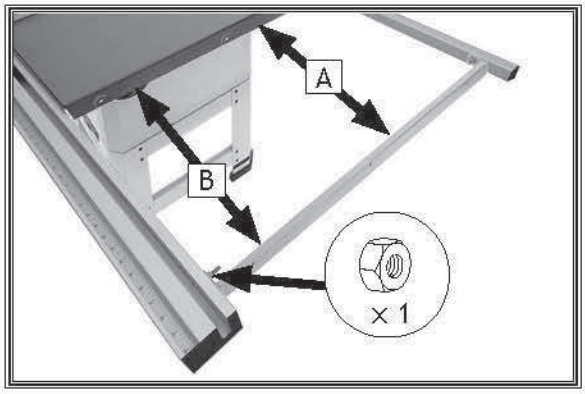


Figure 33. Fence rail brace installed.

32. 25103 table saw does not include fence rail brace. The right -hand extension board and support legs (2) are included in 25103. Install the extension board on right extension wing and front rail. Then install the support legs on the extension board, adjust the leg feet to make well suppot of the table saw.

Figure 34. 25103 Right-Hand extension board installed.

32. Install blade guard as instructed on **Page 35.**

33. Secure rear access panel and motor cover each with (6) M5-.8 x 12 button head cap screws (see **Figure 34**).

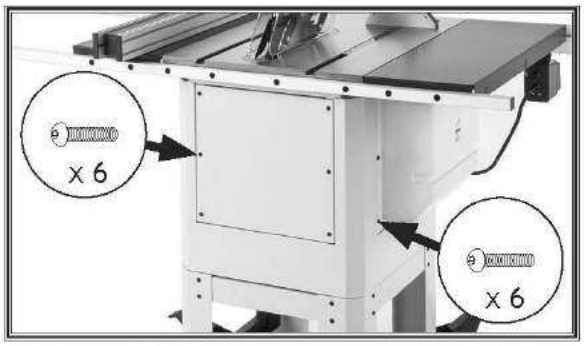


Figure 34. Rear access panel installed.

Dust Collection

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.

Tools Needed **Qty**
Dust Collection System 1
Dust Hose 4" 1
Hose Clamps 4".....2

To connect a dust collection hose, do these steps:

1. Fit 4" dust hose over dust port, as shown in **Figure 35**, and secure it in place with hose clamp.

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

   Note: *A tight fit is necessary for proper performance.*

⚠CAUTION

This machine creates substantial amounts of dust during operation. Breathing airborne dust on a regular basis can result in permanent respiratory illness. Reduce your risk by wearing a respirator and capturing the dust with a dust collection system.

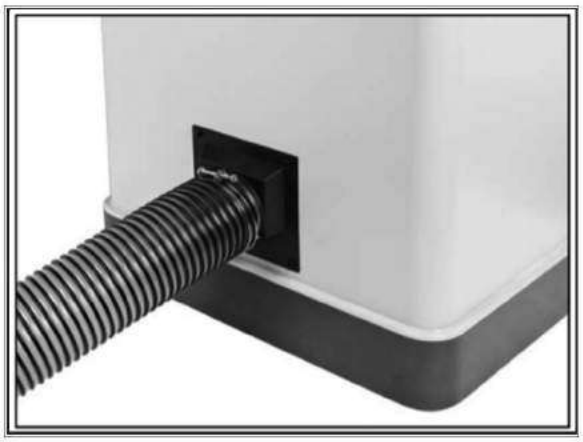


Figure 35. Dust port connected to dust collection system.

Test Run

Once assembly is complete, test run the machine to ensure it is properly connected to power and safety components are functioning properly.

If you find an unusual problem during the test run, immediately stop the machine, disconnect it from power, and fix the problem BEFORE operating the machine again. The **Troubleshooting** table in the **SERVICE** section of this manual can help.

To test run machine, do these steps:

1. Lower blade all the way down, and make sure all tools and objects used during setup are cleared away from machine.

2. Connect machine to power supply.

3. Turn machine *ON*, verify motor operation, then turn machine *OFF*.

   The motor should run smoothly and without unusual noises.

4. Insert switch disabling pin through green ON/START button (see example).

5. Press green ON/START button to test disabling feature on switch. The machine should not start.

   – If machine *does not* start, the switch disabling feature is working as designed.

   – If machine *does* start, 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.

⚠WARNING

Serious injury or death can result from using this machine BEFORE understanding its controls and related safety information. DO NOT operate, or allow others to operate, machine until the information is understood.

⚠WARNING

DO NOT start machine until all preceding setup instructions have been performed. Operating an improperly set up machine may result in malfunction or unexpected results that can lead to serious injury, death, or machine/property damage.

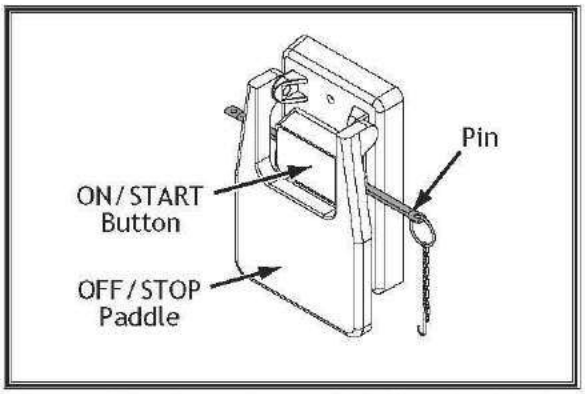


Figure 36. Removing switch key to disable paddle switch.

Recommended Adjustments

For your convenience, the following adjustments have been performed at the factory and no further setup is required to operate this machine. However, because of the many variables involved with shipping, we recommend that you verify these adjustments to ensure that this saw cuts safely and accurately.

Step-by-step instructions for these adjustments can be found in **SECTION 7: SERVICE.**

Adjustments that should be verified:

1. Blade Tilt Stop Accuracy

2. Miter Slot Parallel to Blade

3. Table/Dado Insert Adjustment

OPERATIONS

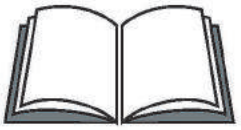
General

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!

The overview below provides the novice machine operator with a basic understanding of how the machine is used during operation, so the machine controls/components discussed later in this manual are easier to understand. Due to its generic nature, this overview is **NOT** intended to be an instructional guide.

⚠WARNING



To reduce your risk of serious injury or damage to the machine, read this entire manual BEFORE using machine.

⚠WARNING

Eye injuries, respiratory problems, or hearing loss can occur while operating this machine. Wear personal protective equipment to reduce your risk from these hazards.

⚠CAUTION

Children or untrained people can be killed or seriously injured by this machine. This risk increases with unsupervised operation. To help prevent unsupervised operation, disable and lock the switch before leaving machine unattended! Place key in a well-hidden or secure location.

Operation Overview

The purpose of this overview is to provide the novice machine operator with a basic understanding of how the machine is used during operation, so the machine controls/ components discussed later in this manual are easier to understand.

Due to the generic nature of this overview, it is **not** intended to be an instructional guide. To learn more about specific operations, read this entire manual and seek additional training from experienced machine operators, and do additional research outside of this manual by reading "how-to" books, trade magazines, or websites.

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

1. Examines workpiece to make sure it is suitable for cutting.
2. Adjusts blade tilt, if necessary, to correct angle of desired cut.
3. Adjusts blade height approximately 1/4" higher than thickness of workpiece.
4. Adjusts fence to desired width of cut, then locks it in place.
5. Checks outfeed side of machine for proper support and to make sure workpiece can safely pass all the way through blade without interference.
6. Puts on safety glasses, respirator, hearing protection, and locates push sticks if needed.
7. Starts saw.
8. Feeds workpiece all the way through blade while maintaining firm pressure on workpiece against table and fence, and keeping hands and fingers out of blade path and away from blade.
9. Stops machine promptly after cut is complete.

Workpiece Inspection

Some workpieces are not safe to cut on this machine or may need to be modified before they can be safely cut.

Before beginning the cutting operation, inspect 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 cementitious backer board creates extremely fine dust and may reduce the life of the motor 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, and yields poor results.
- **Excessive Warping.** Workpieces with excessive cupping, bowing, or twisting are dangerous to cut because they are unstable and may move unpredictably when being cut.
- **Minor Warping.** Slightly cupped workpieces can be safely supported with the cupped side facing the table or fence; however, workpieces supported on the bowed side will rock during the cut, which could cause kickback or severe injury.

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 37.**

Examples of non-through cuts include dadoes and rabbets. Non-through cuts have a higher risk of injury from kickback because the blade guard must be removed. However, the riving knife MUST be installed because it still provides some protection. When making non-through cuts with a dado blade, do not attempt to cut the full depth in one pass. Instead, take multiple light passes to reduce the load on the blade. A dado blade smaller than 10" will require removal of the riving knife, because the riving knife will be higher than the blade.

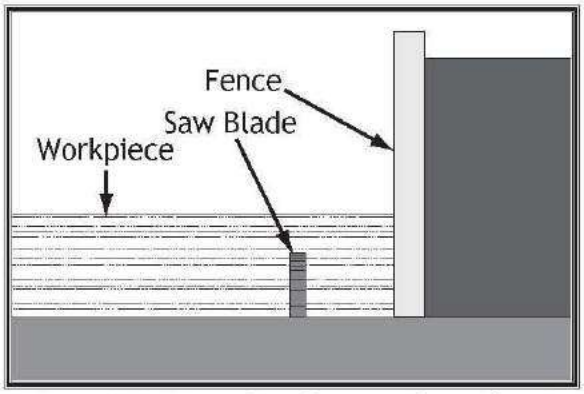


Figure 37. Example of a non-through cut.

Through Cuts

A through cut is a sawing operation in which the workpiece is completely sawn through, as shown in **Figure 38.** 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.

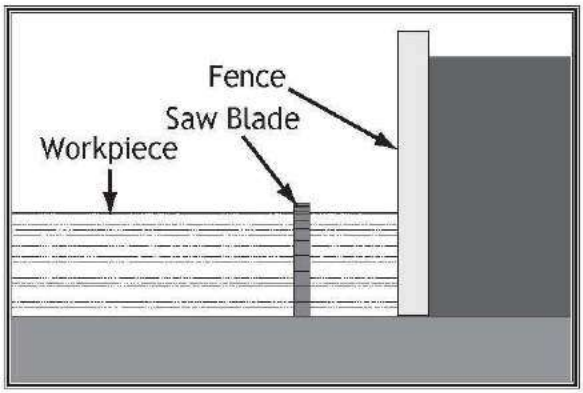


Figure 38. Example of a through cut (blade guard not shown for illustrative purposes).

NOTICE

If you have never used this type of machine or equipment before, seek training from an experienced machine operator or read "how to" books before beginning any projects. Regardless of the content in this section, Shop Fox will not be held liable for accidents caused by lack of training.

Blade Size Requirements

The spreader/riving knife included with this machine is 0.090" (2.3mm) thick and is only designed for 10" diameter blades.

When choosing a main blade, make sure the blade size meets the requirements listed below. The thickness of the blade body and teeth can be measured with calipers or any precision measuring device.

Blade Size Requirements:

- Body Thickness: 0.060"-0.086" (1.5-2.1mm)
- Kerf (Tooth) Thickness: 0.094"-0.126" (2.4-3.2mm)

⚠WARNING

Using a blade that does not meet the specified blade size requirements presents a hazardous condition that could cause kickback, operator injuries, or property damage. ALWAYS use a blade that meets the given blade size requirements.

Blade Selection

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.

Ripping Blade Features (Figure 39):

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

Crosscut Blade Features (Figure 40):

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

Combination Blade Features (Figure 41):

- Designed to cut both with and across grain
- 40-50 teeth
- Alternate top bevel and flat, or alternate top bevel and raker tooth profile
- Teeth are arranged in groups
- Gullets are small and shallow (similar to a cross-cut blade), then large and deep (similar to a ripping blade

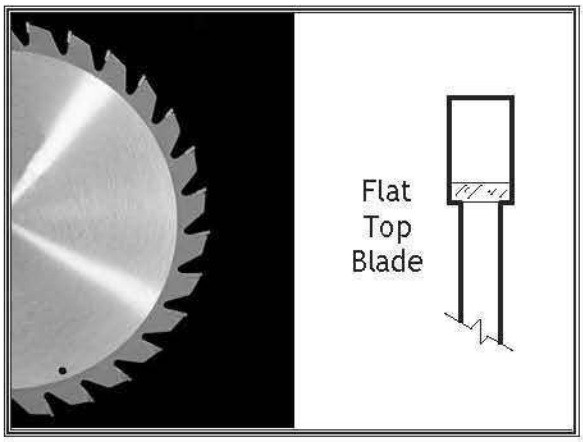


Figure 39. Example of a ripping blade.

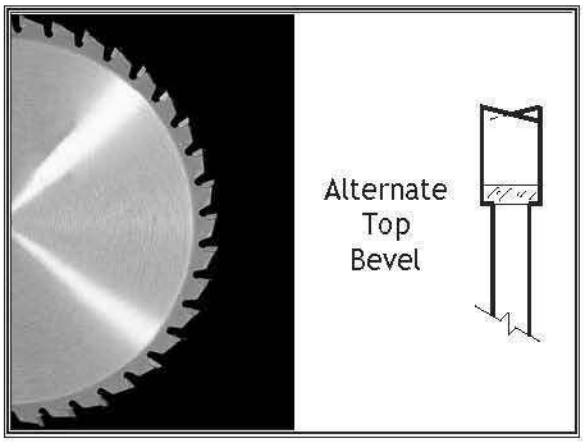


Figure 40. Example of a crosscut blade.

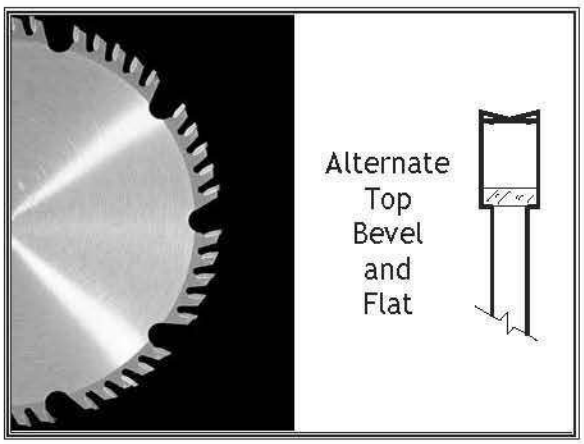


Figure 41. Example of a combination blade.

Laminate Blade Features (Figure 42):

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

Thin Kerf Blade: A blade with thinner kerf than a standard blade. Since the spreader/riving knife included with this table saw is sized for standard blades, thin kerf blades *cannot* be used on this saw unless they meet the **Blade Requirements** specified in this manual; otherwise, they will increase the risk of kickback.

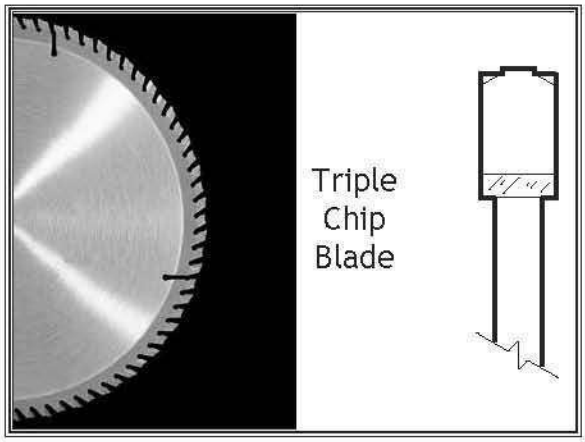


Figure 42. Example of a laminate blade.

Dado Blades

Stacked Dado Blade (see Figure 43): Multiple blades are stacked together to control the cutting width. Stacked dado blades are more expensive than wobble blades, but typically produce higher quality results.

Wobble Dado Blade: A single blade mounted at a slight angle on an arbor hub. The blade angle is adjustable on the hub, and the width of the dado cut is controlled by the angle setting of the blade.

Figure 43. Stacked dado blade.

Blade Installation

Properly installing the blade is critical to safe cutting operations that produce good results. Review this section, even if your blade came pre-installed.

To install blade, do these steps:

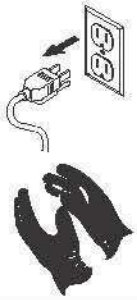
1. DISCONNECT MACHINE FROM POWER!

2. Raise blade arbor all the way up, remove blade guard, table insert (leave Phillips head screws mounted in table throat), and spreader/riving knife.

   Note: *Table insert is held in place by a magnet.*

3. Use included arbor wrenches to loosen and remove arbor nut, flange, and blade (see **Figure 44**). Arbor nut has right-hand threads; turn counterclockwise to loosen.

⚠CAUTION



To reduce risk of injury, always disconnect power to saw before changing blades. Since the blade is sharp, use extra care and wear gloves when installing it.

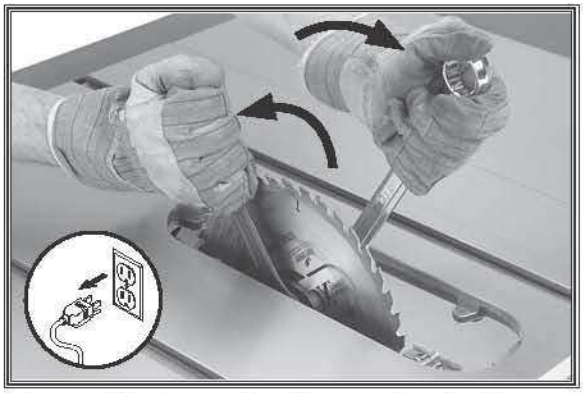


Figure 44. Example of removing table saw blade.

4. Install new blade, flange, and arbor nut on arbor (as shown in **Figure 45**) with teeth facing front of saw.

5. Re-install spreader/riving knife, table insert (see **Page 75**), and blade guard.

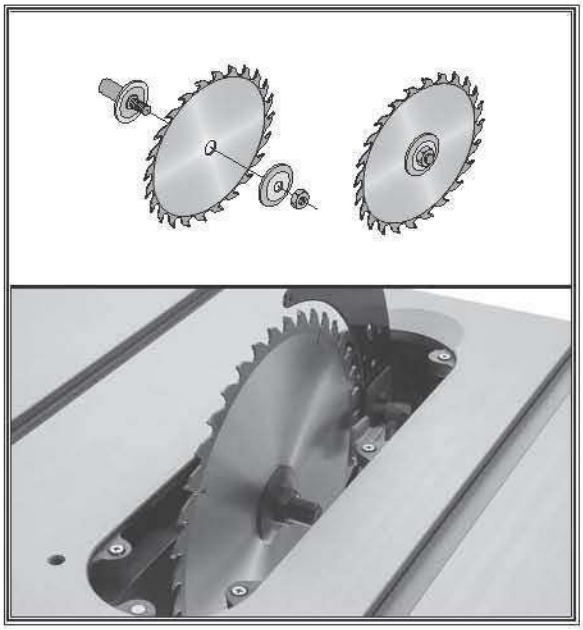


Figure 45. Correct order of installation with teeth facing the correct direction.

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 (see **Figure 46**). Each of these components has important safety functions during the operation of the saw.

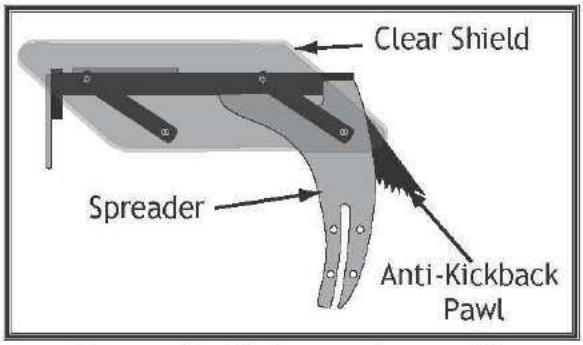


Figure 46. Blade guard assembly components.

Guard

The clear polycarbonate guard allows the operator to watch 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, the guard must always be in the downward position against the table 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/Riving Knife

The spreader/riving knife is a metal plate that prevents the newly cut kerf of the workpiece from pinching the back side of the blade, causing kickback.

The spreader/riving knife also acts as a barrier behind the blade, which can help prevent hand from being pulled into the blade in certain situations if a kickback occurs.

⚠CAUTION

In order to work properly, the spreader cannot be bent or misaligned with the blade. If the spreader accidentally gets bent, take the time to straighten it or just replace it. Using a bent or misaligned spreader will increase the risk of kickback! Refer to Page 69 to check or adjust alignment if necessary.

Installing Blade Guard & Spreader/Riving Knife

1. DISCONNECT MACHINE FROM POWER!
2. Remove table insert, but leave Phillips head screws mounted in table throat.
3. Raise blade all the way up.
4. Insert lower set of holes on spreader/riving knife into bracket slot, and tighten lock lever to secure spreader (see **Figure 47**).

   Note: *Do not insert upper set of holes on spreader into bracket slot. Doing so will result in improper installation of blade guard.*

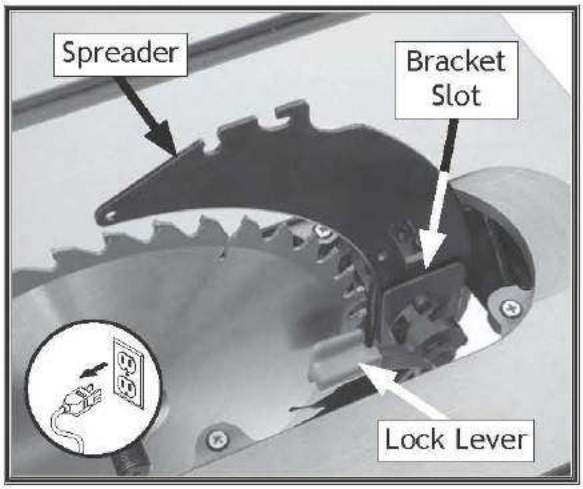


Figure 47. Lock lever used to secure spreader/riving knife.

5. Re-install table insert (refer to **Table/Dado Insert Adjustment** on **Page 75**).

6. Tug spreader upward to verify it is locked.

7. Push guard lever toward front of saw.

8. Insert rear pin on blade guard into rear slot of spreader (see **Figure 48**), then push down on blade guard assembly so forward pin slides into forward slot of spreader.

9. Push guard lever toward rear of saw, locking blade guard.

10. Tug upward on blade guard assembly to verify that it is locked into spreader.

    When properly installed, the blade guard should be set up similarly to **Figure 49**. It should pivot freely up and down and return to table in resting position. It should also swing up high enough to accommodate workpiece.

11. Swing one side of blade guard up and out of the way.

12. While lifting up on right spreader pawl, place a straightedge against blade and spreader, making sure straightedge does not touch a blade tooth.

    When properly aligned, spreader/riving knife will be in "Alignment Zone," shown in **Figure 50**, and will be parallel with blade.

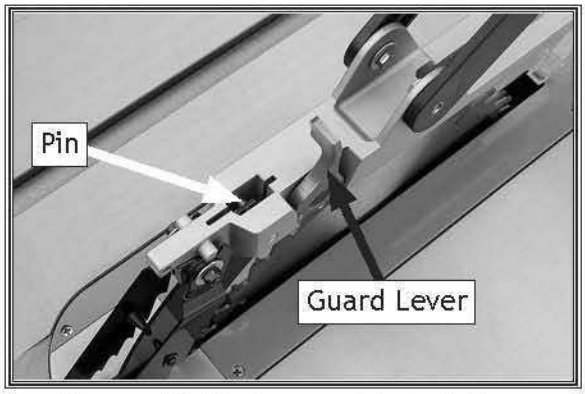


Figure 48. Blade guard installation.

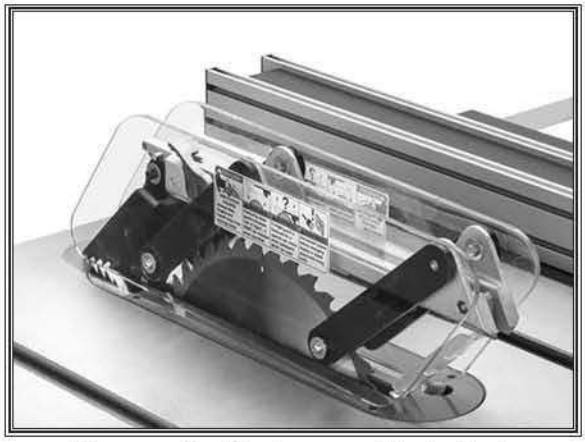


Figure 49. Blade guard installed.

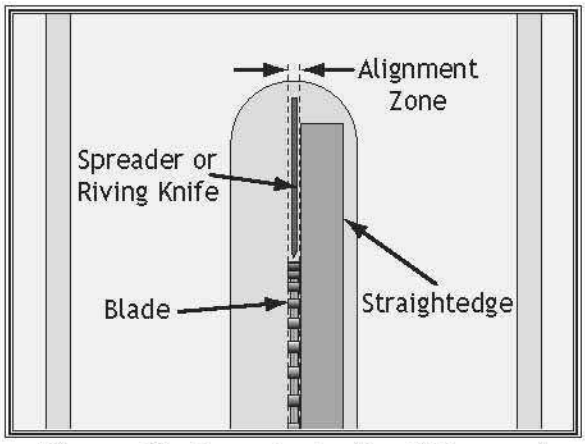


Figure 50. Spreader in the "Alignment Zone."

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 resting position after pivoting, shown in **Figure 51.**

If the pawls fail to return to the resting position, the pivot area may need to be cleaned or the spring may have been dislodged or broken and will need to be fixed/replaced.

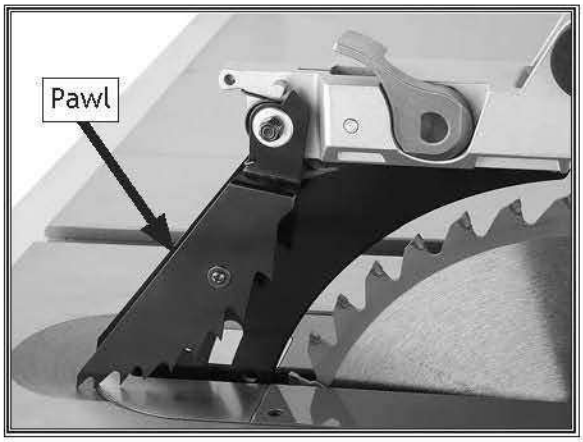


Figure 51. Pawls in resting position.

Disabling Pawls

You might disable 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. Use your best judgment before retracting the pawls, as they are provided for your safety.

To disable pawls, do these steps:

1. DISCONNECT MACHINE FROM POWER!

2. Remove cap screw, locking hex nut, washers, pawls, and retaining spring from blade guard assembly (see **Figure 52**).

⚠CAUTION

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

⚠CAUTION

Pawls are sharp and can cut fingers or hands. Use caution, and wear leather gloves when handling pawls to reduce risk of injury.

Enabling Pawls

To enable the pawls, re-install retaining spring, pawls, washers, cap screw, and locking hex nut onto blade guard assembly. Do not overtighten.

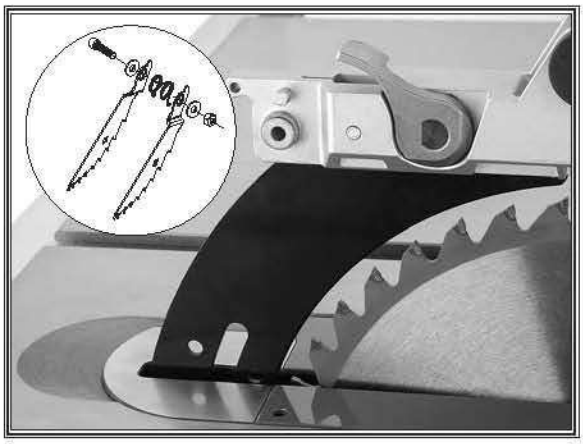


Figure 52. Pawls Removed.

When to Use 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). If the blade guard is removed for specific operations, always immediately replace it after those operations are complete.

NOTICE

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

When Not to Use 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!

Riving Knife

The spreader also functions as a riving knife, which works in the same manner as the spreader, but is used for non-through cuts. 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 a spreader and a riving knife is that a riving knife mounts below the blade's highest point of rotation, as shown in **Figure 53**.

The height difference between a riving knife and a 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).

Similar to the spreader, the riving knife acts as a barrier behind the blade to reduce the risk of hands being pulled into the blade if kickback occurs.

When used as a riving knife, the spreader/riving knife must be kept within the range shown in **Figure 54**. For that reason, a 10" blade is required for operations that use a riving knife.

To install riving knife, do these steps:

1. DISCONNECT MACHINE FROM POWER!
2. Remove table insert, but leave Phillips head screws mounted in table throat.

   Note: *Table insert is held in place by magnet.*
3. Raise blade all the way up.
4. Insert *upper* set of holes on spreader/riving knife into bracket slot and tighten lock lever to secure spreader/riving knife (see **Figure 55**).
5. Re-install table insert (refer to **Page 75**).
6. Tug upward on top of spreader/riving knife to verify it is locked.

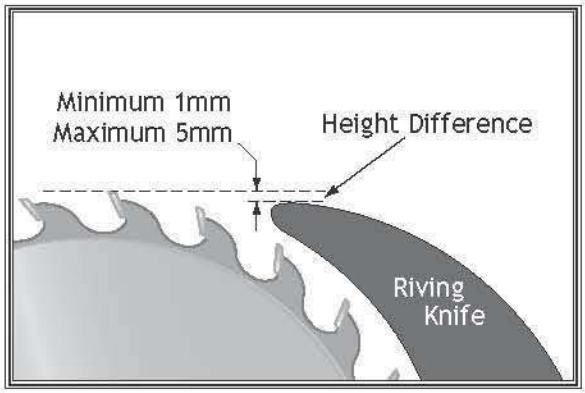


Figure 53. Example of height difference between riving knife and blade.

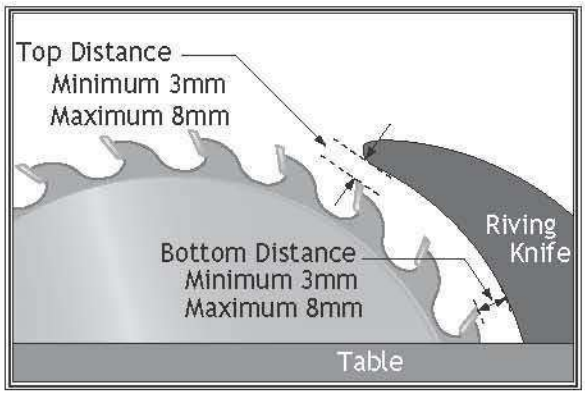


Figure 54. Example of allowable top and bottom distances between riving knife and blade.

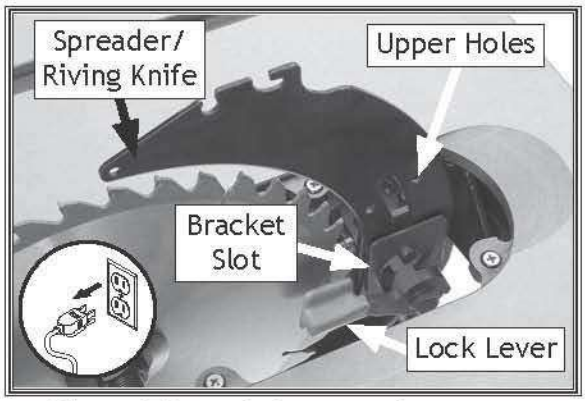


Figure 55. Lock lever used to secure spreader.

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, and when using a tenoning jig), or when using a 10" diameter dado blade.

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

Do not use the riving knife with a dado blade that has a diameter smaller than 10" in diameter. 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 for through cuts.

⚠WARNING

To ensure riving knife works safely, it MUST be aligned with and correctly adjusted to blade. Refer to Page 69 to check or adjust riving knife alignment.

Ripping

Ripping means cutting with the grain of a natural wood workpiece. In 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 11** and take necessary precautions to reduce likelihood of kickback.

2. If using natural wood, joint one long edge of workpiece on a jointer.

3. DISCONNECT MACHINE FROM POWER!

4. Ensure that blade guard/spreader is installed.

5. Set fence to desired width of cut on scale.

6. Adjust blade height so highest saw tooth protrudes no more than 1/4" above workpiece.

7. Set up safety devices such as featherboards or other anti-kickback devices, making sure no safety devices are contacting blade.

8. Plug saw into power source, turn it ***ON***, and allow it to reach full speed.

   Note: *Jointed edge of workpiece must slide against fence during cutting operation.*

9. Use a push stick to feed workpiece through saw blade, as shown in **Figure 56**, until workpiece is completely beyond saw blade.

⚠CAUTION

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

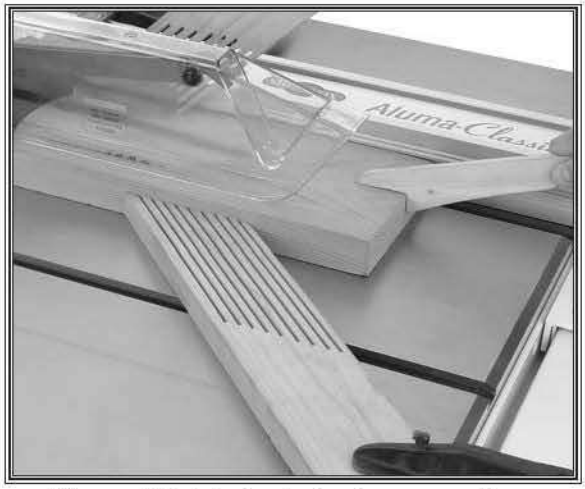
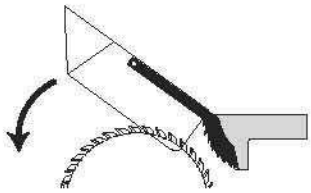


Figure 56. Typical ripping operation.

⚠WARNING

Turn saw *OFF* and allow blade to come to a complete stop before removing cutoff piece. Failure to follow this warning could result in severe cuts or amputation.

⚠WARNING



Keep blade guard installed and in 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, usually with a miter saw In other man-made materials, such as MDF or plywood, crosscutting means cutting across the width of the workpiece.

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

1. DISCONNECT MACHINE FROM POWER!
2. Ensure that blade guard/spreader is installed.
3. Move rip fence aside and position miter gauge, adjusted to 90°, in a miter slot.
4. Adjust blade height so teeth protrude no more than 1/4" above workpiece.
5. Slide miter gauge near blade and adjust workpiece so blade will cut on waste side of line.
6. Plug in table saw, turn it ***ON***, and allow it to reach full speed.
7. Hold workpiece firmly against face of miter gauge (as shown in **Figure 57**), and ease it through blade until workpiece is completely past saw blade.

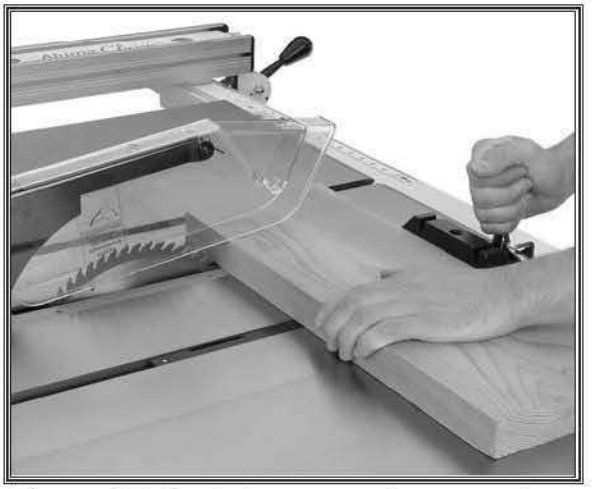


Figure 57. Typical crosscutting operation.

⚠WARNING

Turn saw *OFF* and allow blade to come to a complete stop before removing cutoff piece. Failure to follow this warning could result in severe cuts or amputation.

Miter Cuts

A miter cut 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 MACHINE FROM POWER!
2. Ensure that blade guard/spreader is installed.
3. Determine angle of cut. If angle needs to be very precise, use a protractor to set miter gauge to blade.
4. Place face of miter gauge against edge of workpiece and place bar across face of workpiece. Use bar as a guide to mark your cut, as shown in **Figure 58.**
5. Place miter gauge back into slot and hold workpiece firmly against miter gauge body. Slide miter gauge near blade and adjust workpiece so blade will cut on waste side of line.
6. Proceed to make cut in same manner as described in **Crosscutting** instructions.

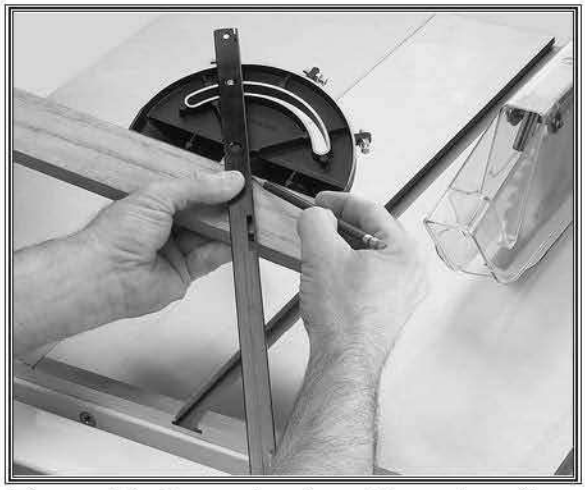


Figure 58. Example of marking miter line.

Blade Tilt/Bevel Cuts

When the blade tilt adjustment bolts are properly adjusted (as described on **Page 65**), the blade tilt handwheel allows the operator to tilt the blade to the left, between 0° and 45°. This is used most often when cutting bevels, compound miters, or chamfers. **Figure 59** shows an example of the blade when tilted to 45°.

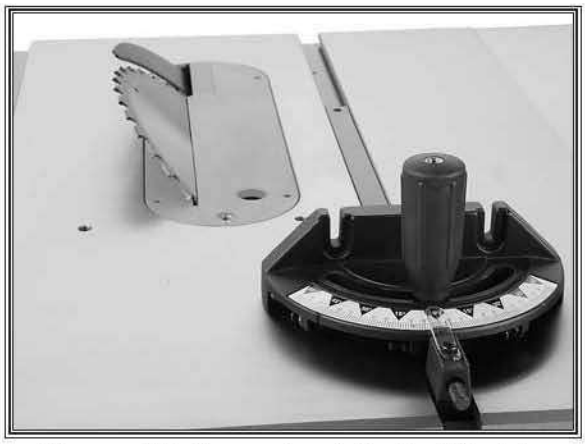


Figure 59. Example of blade tilted to 45° for bevel cutting (blade guard only removed for clarity.

Dado Cutting

Commonly used in furniture joinery, a dado is a straight channel cut in the face of the workpiece. Dadoes are "non-through" cuts that can be made with a dado blade or a standard saw blade. **Figure 60** shows a cutaway view of a dado cut being made with a dado blade.

The Model 25102 can accommodate dado blades up to 10" in diameter. However, you MUST install the included riving knife while using a 10" diameter dado blade, as it provides a barrier behind the blade and reduces the risk of hands being pulled into the blade if kickback occurs.

DO NOT use the riving knife if you install a dado blade smaller than 10" in diameter. 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 and trying to turn the saw *OFF* with the workpiece stuck halfway through the cut.

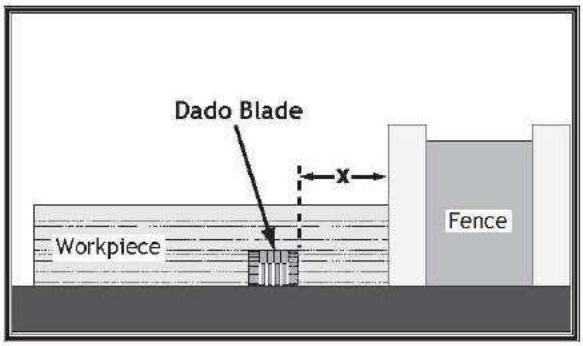


Figure 60. Example of a dado being cut with a dado blade.

Installing Dado Blade

1. DISCONNECT MACHINE FROM POWER!

2. Remove table insert, blade guard assembly, spreader/riving knife, and saw blade.

3. Attach and adjust dado blade system according to dado blade manufacturer's instructions.

4. Install included dado table insert.

⚠WARNING

DO NOT make through cuts with a dado blade. The extra width of a dado blade will increase risk of kickback during a through cut. Dado blades are only intended for non-through cuts. Failure to heed this warning could result in serious injury.

Cutting Dadoes with a Dado Blade

Because dado blades are much wider than standard blades, they place a greater amount of force against the workpiece when cutting. This additional force increases the risk of kickback, requiring the operator to take additional steps when cutting to keep their injury risk at an acceptable level.

⚠WARNING

Dado blades have a higher risk of kickback than normal blades because their larger size applies stronger forces to the workpiece. This risk increases relative to depth and width of 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 desired cutting depth.

Figure 61 demonstrates the sequential process of making multiple, light cuts that get progressively deeper. The actual number of cuts used should be determined by workpiece hardness, total dado depth, and feed rate. In general, if you hear the motor slow down during the cut, you are cutting too deep or feeding too fast. Slow down!

To cut dado with dado blade, do these steps:

1. DISCONNECT MACHINE FROM POWER!
2. Adjust dado blade to desired depth of cut.
3. Adjust distance between fence and inside edge of blade, as shown in **Figure 60** on **Page 43**, to dado length of a workpiece.

   – If dadoing across workpiece, use miter gauge and carefully line up desired cut with dado blade. DO NOT use fence in combination with miter gauge.

4. Reconnect saw to power source.
5. Turn saw ***ON***. Blade should run smoothly, with no vibrations.
6. When blade has reached full speed, perform test cut with scrap piece of wood.

   – If cut is satisfactory, repeat cut with actual workpiece.

⚠WARNING

Never try to cut a warped board by holding it down against the table. If kickback occurs, your hand could be pulled into blade, resulting in accidental contact with rotating blade, causing severe cuts or amputation.

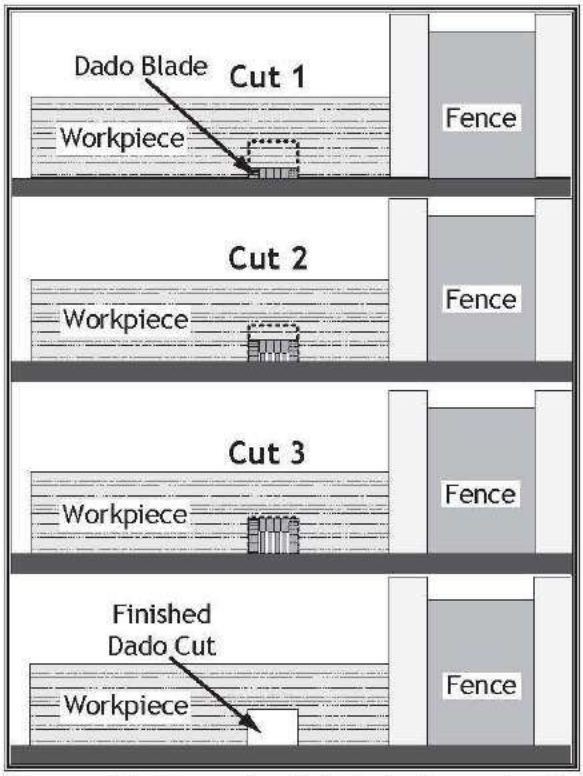


Figure 61. Example of dado being cut with multiple light cuts, instead of one deep cut.

Cutting Dadoes with a Standard Blade

A ripping blade (described on **Page 32**) is typically the best blade to use when cutting dadoes with a standard blade because it removes sawdust very efficiently.

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

1. DISCONNECT MACHINE FROM POWER!
2. Mark width of dado cut on workpiece. Include marks on edge of workpiece so cut path can be aligned when workpiece is lying on table.
3. Raise blade up to desired depth of cut (depth of dado channel desired).
4. Set saw up for type of cut you need to make, depending on whether it is a rip cut (**Page 40**) or crosscut (**Page 41**).
5. Align blade to cut one side of dado, as shown in **Figure 62.**
6. Reconnect saw to power source and turn saw ***ON***. Allow blade to reach full speed, then perform cutting operation.
7. Repeat cutting operation on other side of dado, as shown in **Figure 63.**
8. Make additional cuts (see **Figure 64**) in center of dado to clear out necessary material. Dado is complete when channel is completely cleared out.

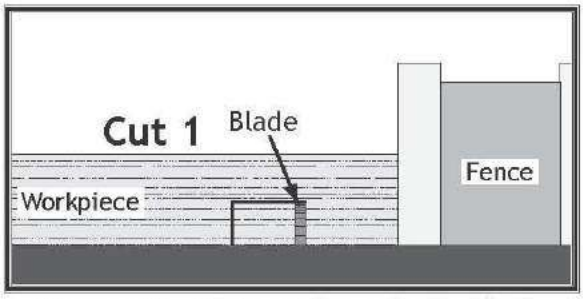


Figure 62. First cut for a single-blade dado.

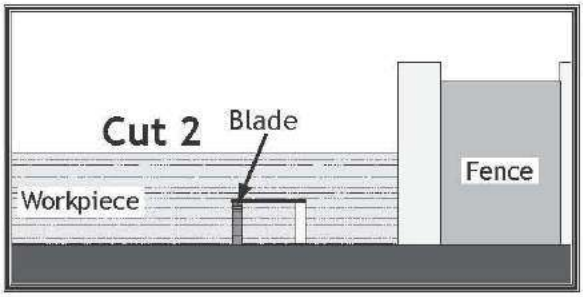


Figure 63. Second cut for a single-blade dado.

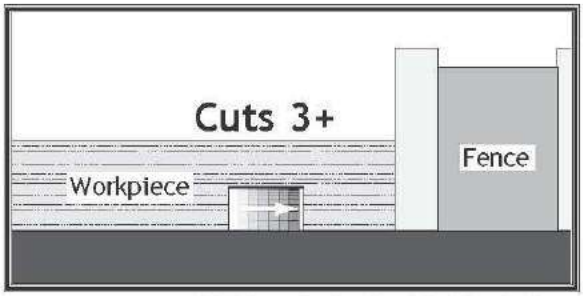


Figure 64. Additional single-blade dado cuts.

Rabbet Cutting

Commonly used in furniture joinery, a rabbet cut 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 along the edge of a workpiece with a dado blade requires a sacrificial fence (see **Figure 65**). Make the sacrificial fence the same length as the fence and ¾" 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.

When using a dado blade, the included dado table insert must be installed and used during rabbeting operations.

Cutting Rabbets with a Dado Blade

1. DISCONNECT MACHINE FROM POWER!

2. Adjust dado blade to height needed for rabbeting operation. When cutting deep rabbets, take more than one pass to reduce risk of kickback.

3. Adjust fence and align workpiece to perform cutting operation, as shown in **Figure 66**.

4. Reconnect saw to power source and turn saw ***ON***. When blade has reached full speed, perform a test cut with a scrap piece of wood.

   —If cut is satisfactory, repeat cut with workpiece.

⚠WARNING

Dado blades have a higher risk of kickback than normal blades because their larger 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.

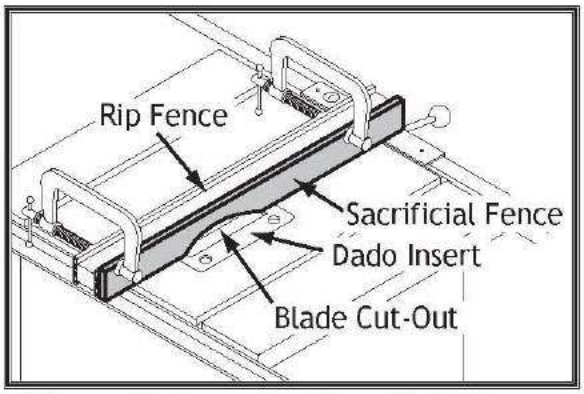


Figure 65. Example of sacrificial fence.

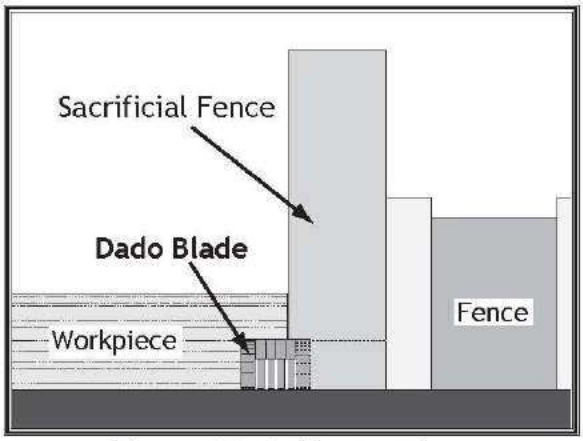


Figure 66. Rabbet cutting.

MAINTENANCE

General

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

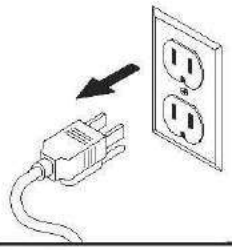
Daily Check:
- Inspect blades for damage or wear.
- Check for loose mounting bolts/arbor nut.
- Check cords, plugs, and switch for damage.
- Check for the proper function of the blade guard (see **Blade Guard Assembly** on **Page 35**).
- Check for any other condition that could hamper the safe operation 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 77**).

Every 6-12 Months:
- Lubricate trunnion slides (**Page 64**).
- Lubricate worm gear (**Page 64**).
- Lubricate leadscrew (**Page 64**).

⚠WARNING



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

Cleaning & Protecting

Cleaning the Model W1837 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.

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

Lubrication

It is essential to clean components before lubricating them because dust and chips build up on lubricated components and make them hard to move. Simply adding more grease to them will not yield smooth moving components.

Clean the components in this section with mineral spirits or other oil/grease solvent cleaner and shop rags.

If you thoroughly clean the components in this section before lubricating them, the result will be silky smooth movement when turning the handwheels, which will result in much higher enjoyment on your part!

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

Clean out the front and rear trunnion slides with mineral spirits and a rag, then apply lithium grease into each groove. Move the blade tilt back-and-forth to spread the grease (see **Figure 96**).

Worm Gear, Bull Gear, Leadscrew

Clean away any built up grime and debris from the worm gear, bull gear, and leadscrew (see **Figures 97-98**) with a wire brush, rags, and mineral spirits. Allow the components to dry, then apply a thin coat of white lithium grease.

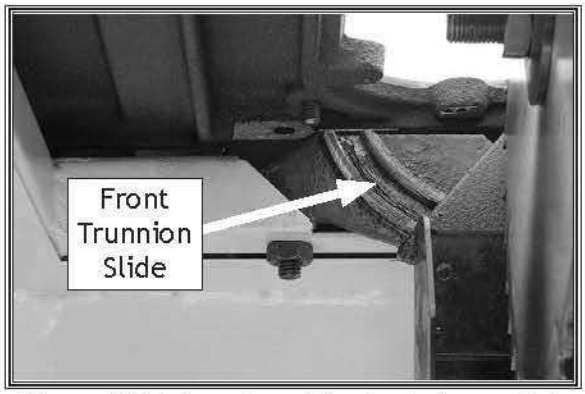


Figure 96. Trunnion slide (only front slide shown).

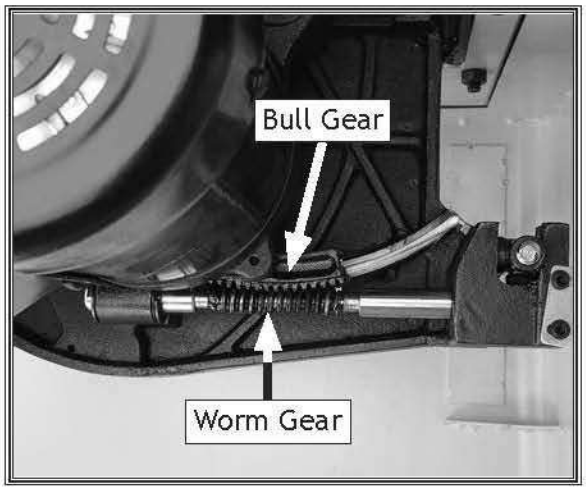


Figure 97. Location of the bull and worm gears.

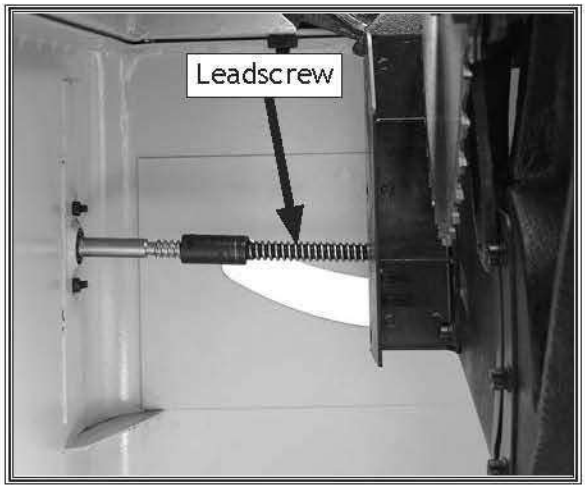


Figure 98. Location of the leadscrew.

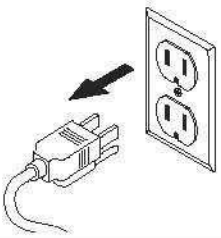
SERVICE

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: **techsupport@woodstockint.com.**

⚠WARNING



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

Blade Tilt Calibration

The blade tilt settings for this saw have been set at the factory and should not require adjustment during assembly. However, after prolonged use, or if the saw does not cut accurate bevels, the settings should be checked and adjusted accordingly.

Note: *The tilt scale reads "0" when the blade is 90° to the table.*

Tools Needed	Qty
90° Square	1
45° Square	1
Hex Wrench 4mm	1

Setting 90° Stop

1. DISCONNECT MACHINE FROM POWER!

2. Raise blade as high as it will go, then tilt it toward 90° until it stops and cannot be tilted any more.

3. Place a 90° square against table and blade so it contacts blade evenly from bottom to top, as shown in **Figure 99.** Make sure a blade tooth does not obstruct placement of square.

   —If blade *is* 90° to table, then no adjustments are necessary. Make sure tilt indicator arrow shown in **Figure 100** points to 0° mark on scale. Adjust position by loosening Phillips head screws, moving indicator with your fingers, then tightening screws.

   —If blade *is not* 90° to table, you will need to adjust 90° stop nuts. Proceed to **Step 4.**

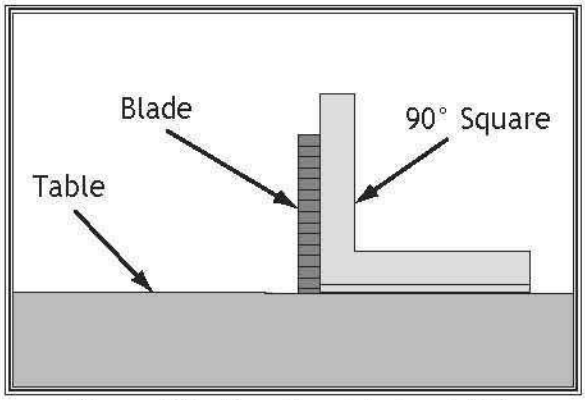


Figure 99. Checking blade at 90°.

Figure 100. Tilt indicator arrow location.

4. Remove motor cover.

5. Loosen (2) M8-1.25 hex nuts on leadscrew (see **Figure 101**).

6. Tilt blade to about 5° so there is room for stop nuts to move.

7. Loosen stop nuts and adjust according to how far off blade was from 90°. Recheck blade and repeat adjustment as necessary until blade stops at 90°, then tighten stop nuts against each other and replace motor cover.

   Note: *Turning stop nuts clockwise adjusts blade further to right; turning them counterclockwise adjusts blade to left.*

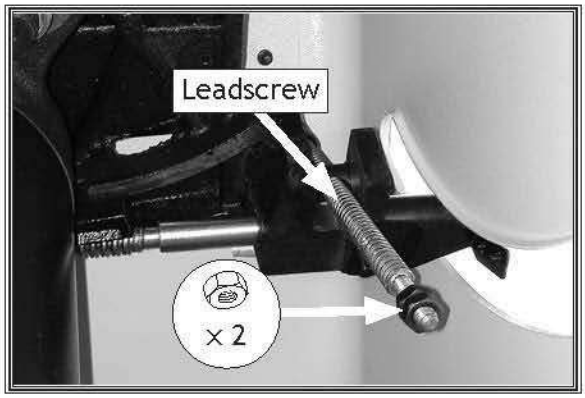


Figure 101. Location of 90° stop nuts.

Setting 45° Stop

1. DISCONNECT MACHINE FROM POWER!

2. Raise 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 table and blade so it contacts blade evenly from bottom to top, as shown in **Figure 102**. Make sure a blade tooth does not obstruct placement of square.

   —If blade *is* 45° to table, then no adjustments need to be made. Proceed to **Step 8**.

   —If blade *is not* 45° to table, you will need to adjust 45° limiting block. Proceed to **Step 4**.

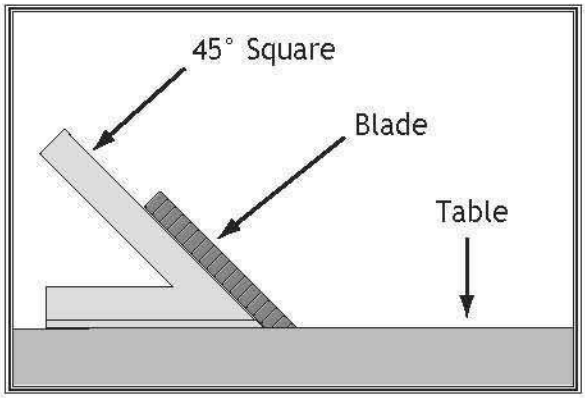


Figure 102. Checking blade at 45°.

4. Remove rear access panel.

5. Loosen (2) M5-.8 × 10 cap screws in 45° limiting block (see **Figure 103**).

6. Tilt blade away from 45° by about 5°, so there is room for limiting block to move.

7. Adjust 45° limiting block according to how far off blade was from 45°, then recheck blade and repeat adjustment as necessary until blade stops at 45°, then tighten cap screws and replace rear access panel.

8. Make sure tilt indicator arrow points to 45° mark on scale. If it doesn't, adjust indicator arrow as described on **Page 65**.

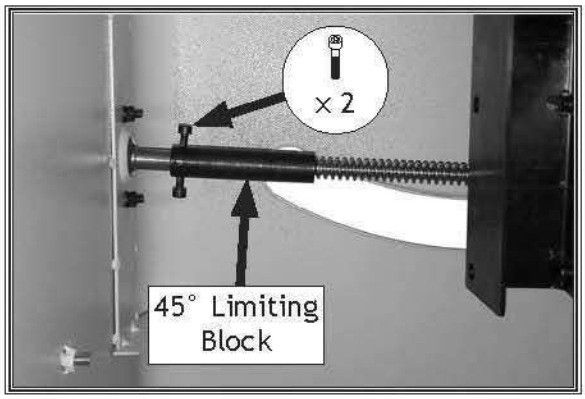


Figure 103. Location of 45° limiting block.

Miter Slot to Blade Parallelism

Your table saw will give the best results if the miter slot and the rip fence are adjusted 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.

Tools Needed	Qty
Adjustable Square	1
Marker	1
Metal Shim Stock	As Needed
Open-End Wrench 12mm	1

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

1. DISCONNECT MACHINE FROM POWER!

2. Tilt blade to 0°, then use an adjustable square to measure distance from miter slot to a carbide tip on blade, as shown in **Figure 104**. Make sure that face of adjustable square is even along miter slot.

3. With end of adjustable square just touching tip, lock square in place. Now, mark carbide tip with a marker where you made this measurement.

4. Rotate marked blade tip to other end of table insert.

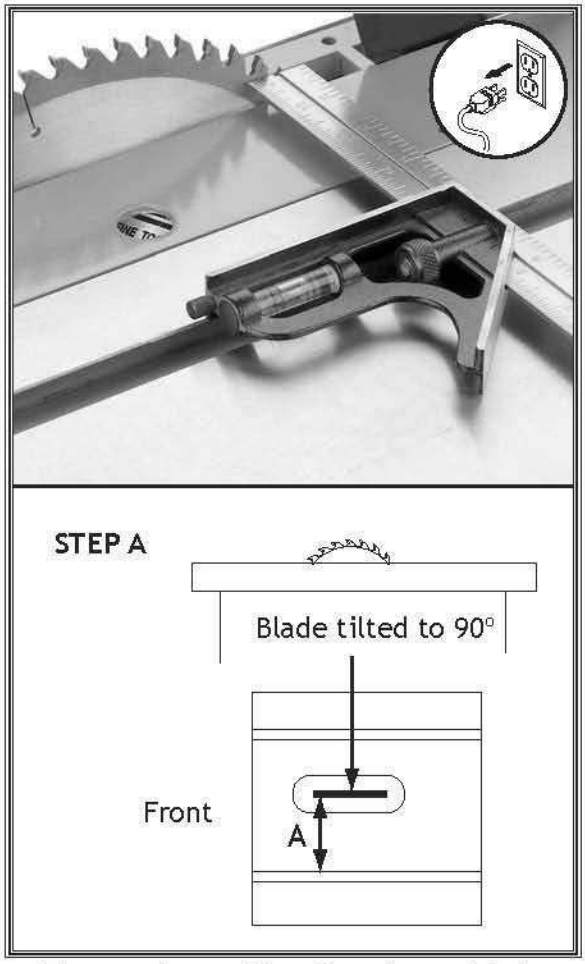


Figure 104. Making first slot-to-blade measurement at 90°.

5. Slide adjustable square down to other end of table insert and compare distance from marked blade tip to end of adjustable square, as shown in **Figure 105**.

   —If blade tip measurement *is* same on both sides, go to **Step 8**.

   —If blade tip *does not* touch end of adjustable square similar to first measurement, table will need to be adjusted. Proceed to **Step 6**.

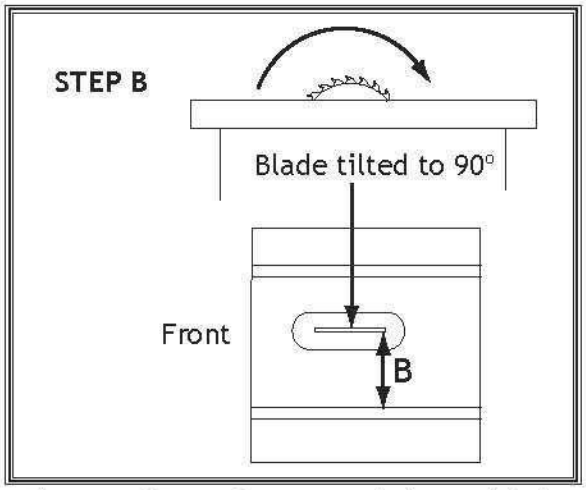


Figure 105. Making second slot-to-blade measurement at 90°.

6. Loosen (4) table mounting bolts securing table top to base (see **Figure 106**), and lightly tap table in direction needed to square table to blade.

7. Repeat **Steps 2-6** until blade and miter slot are parallel, then retighten table mounting bolts.

8. Tilt blade to 45° and recheck miter slot-to-blade parallelism.

   —If blade is still parallel with miter slot, no additional adjustments need to be made.

   —If blade was parallel with miter slot at 0° but not at 45°, one end of table will need to be shimmed higher with metal shim stock. Continue to **Step 9.**

9. Loosen (4) table mounting bolts from **Step 6.**

10. Refer to **Figures 107-108** for shim placement. If distance A is shorter than B, shim(s) will need to be placed under corners #1 and #2. If the distance of B is shorter than A, shim(s) will need to be placed under corner #3. Very thin shim stock works well.

11. Tighten one table mounting bolt a small amount and then repeat with the others, tightening each down the same amount. Continue this process with all the bolts, tightening them a little each time until they are all secure.

12. Now recheck blade to miter slot at 0° and 45° by repeating **Steps 2-5.**

    —If distance of A and B are equal, continue to **Step 13.**

    —If distances are still off, repeat **Steps 9-12.**

13. Once miter slot is adjusted to blade, recheck all measurements and be sure table mounting bolts are secure.

    Note: *If you remove the table in the future, note the shim placements and reassemble them exactly how they came apart.*

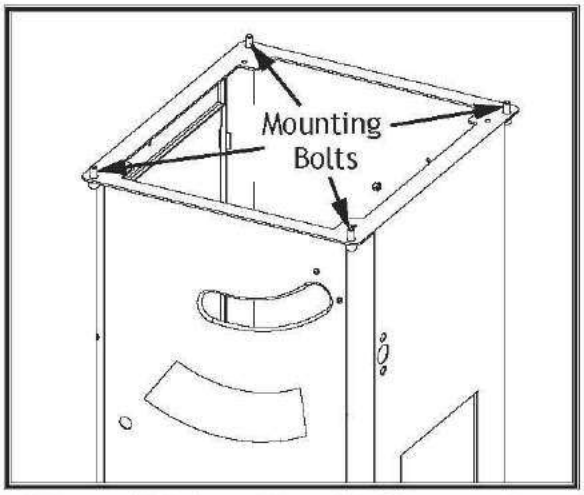


Figure 106. Location of table mounting bolts (table omitted for clarity).

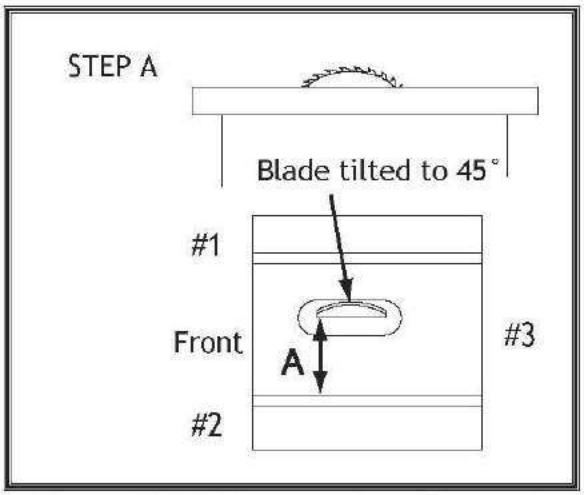


Figure 107. Shim procedure diagram A.

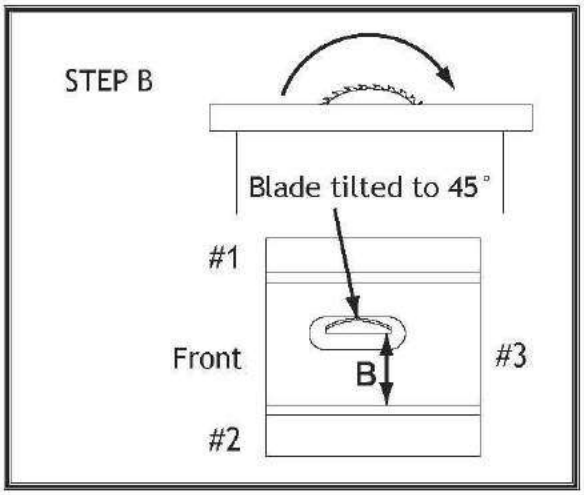


Figure 108. Shim procedure diagram B.

Spreader or Riving Knife Alignment

Checking Alignment

The blade guard spreader/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 be forced sideways during the cut, which will increase the risk of kickback.

Tools Needed	Qty
Straightedge (min. 12")	1

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

1. DISCONNECT MACHINE FROM POWER!

2. Raise saw blade to maximum height so you have easy working access.

3. Place straightedge against top and bottom of blade and spreader/riving knife, as shown in **Figure 109**. Spreader/riving knife should be parallel with blade at both positions and in the "Alignment Zone," as shown in **Figure 110**.

   - If spreader *is* in alignment zone no adjustments need to be made.

   - If spreader/riving knife *is not* parallel with blade and inside alignment zone, then it needs to be adjusted. Proceed to **Adjusting Alignment** instructions.

   - If spreader/riving knife *is not* parallel with blade at either top or bottom, it may be bent. Remove spreader/riving knife, place it on a flat surface and check to see if spreader/riving knife lies evenly along its length.

   - If spreader/riving knife does not lie evenly, proceed to **Adjusting Bent Spreader/Riving Knife** procedure.

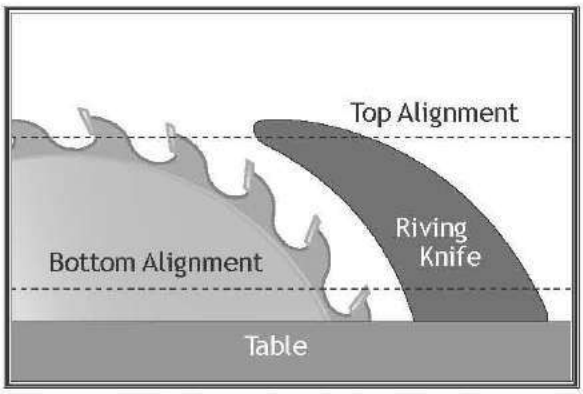


Figure 109. Example of checking top and bottom riving knife parallelism with blade.

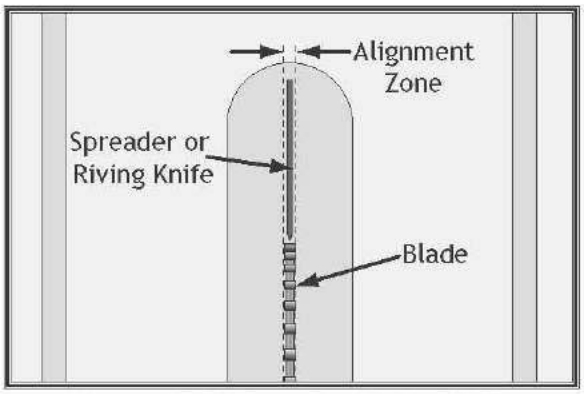


Figure 110. Spreader/riving knife alignment zone.

Adjusting Alignment

The spreader/riving knife mounting position can be adjusted into alignment with the blade using the cap screws on the spreader/riving knife "L" bracket.

Possible Tools Needed	Qty
Hex Wrench 4mm	1

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

1. DISCONNECT MACHINE FROM POWER!

2. Remove table insert, but leave Phillips head screws mounted in table throat.

   Note: *Table insert is held in place by a magnet.*

3. Loosen two cap screws on the "L" bracket (see **Figure 111**), then slide spreader/riving knife as needed to move it into alignment with blade.

4. Follow **Checking Alignment, Steps 1-3** on **Page 69**.

   —If spreader/riving knife *is* in alignment zone, no additional steps are necessary.

   —If spreader/riving knife is still *not* in alignment zone, continue adjusting position of "L" bracket as necessary to correctly align spreader/riving knife.

5. Tighten two cap screws on mounting block to secure spreader/riving knife adjustment.

6. Replace table insert (refer to **Page 75**).

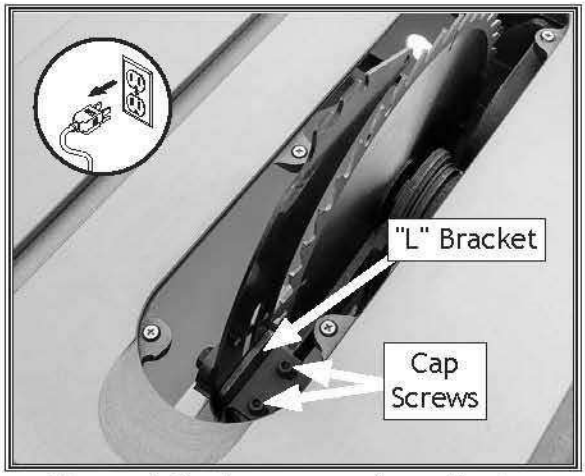


Figure 111. Cap screws for adjusting spreader/riving knife position.

Adjusting Bent Spreader/Riving Knife

1. DISCONNECT MACHINE FROM POWER!

2. Bend spreader/riving knife by hand while installed, then follow **Steps 1-3** in **Checking Alignment** to determine if it is parallel with blade and inside "Alignment Zone" (refer to **Checking Alignment** on **Page 69**).

   —If this does not work, remove spreader/riving knife to straighten.

   —If you cannot straighten spreader/riving knife properly, replace it.

Adjusting Fence

There are three main adjustments for the fence: (1) square, (2) height, and (3) 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
Wrench 19mm	1
Hex Wrench 6mm	1
Machinist's Square	1

Fence Squareness and Height

The fence face must be square to the table in order to produce accurate cuts. The fence is adjustable with two set screws where the fence slot sits in the front rail (see **Figure 112**).

Also, the fence should be adjusted evenly above the table to ensure it does not drag across the surface, as shown in **Figure 113**.

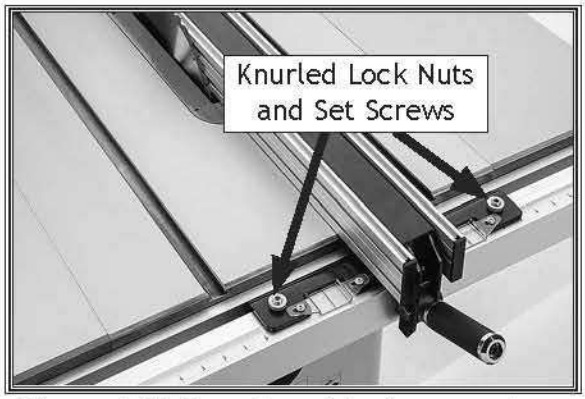


Figure 112. Location of lock nuts and set screws for adjusting fence squareness and height.

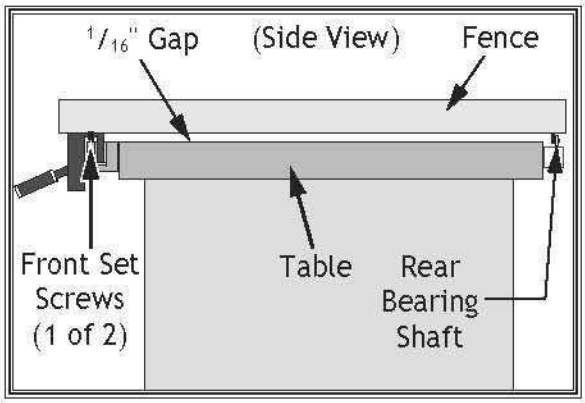


Figure 113. Fence height is adjusted by two front set screws and rear bearing shaft.

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

1. DISCONNECT MACHINE FROM POWER!

2. Place square on table against face of fence (see **Figure 114**) to check if fence is square to table.

   — If fence *is not* square to table, proceed to **Step 3**.

   — If fence *is* square to table, skip to **Step 4**.

3. Loosen knurled lock nuts and adjust set screws (see **Figure 112**) on top of fence bracket to ensure fence face is 90° to table. Tighten lock nuts when fence is square to table.

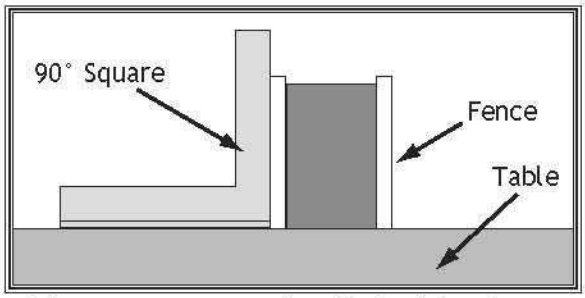


Figure 114. Example of checking fence squareness to table.

4. Measure gap between fence and table top at front and rear of fence.

   — If gap is approximately 1/16" and even from front of table to back (see **Figure 115**), then no additional adjustments are necessary. Proceed to **Fence Handle Clamping Pressure** *below*.

   — If gap is uneven, or if fence height is not approximately 1/16" above table, then continue with **Step 5**.

5. Remove fence assembly and lay it upside down.

6. Remove fence assembly cap as shown in **Figure 116**, then loosen inner and outer jam nuts that secure bearing shaft.

   Note: *Wrench clearance for inner jam nut is tight inside fence assembly. If necessary, hold inner jam nut with wrench and twist bearing shaft to loosen.*

7. Re-install fence assembly.

8. Reach inside fence and adjust height of bearing shaft. Turn shaft clockwise to decrease shaft height; turn shaft counterclockwise to raise shaft height.

9. When satisfied with position of bearing shaft, remove fence and tighten inner and outer jam nuts. Keep roller bearing parallel with rear fence rail.

10. Re-install fence. Repeat **Steps 4-9** until gap between table and fence is approximately 1/16" and even from front to back of table.

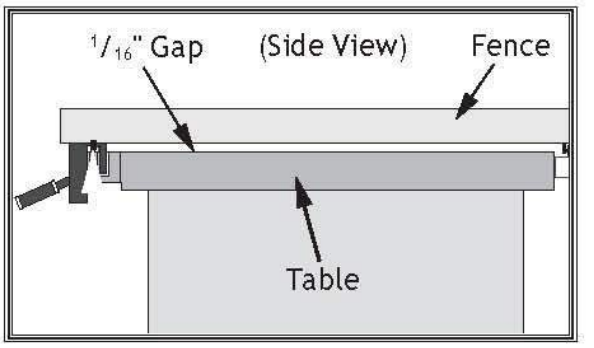


Figure 115. Example of even gap between fence and table approximately 1/16" front to back.

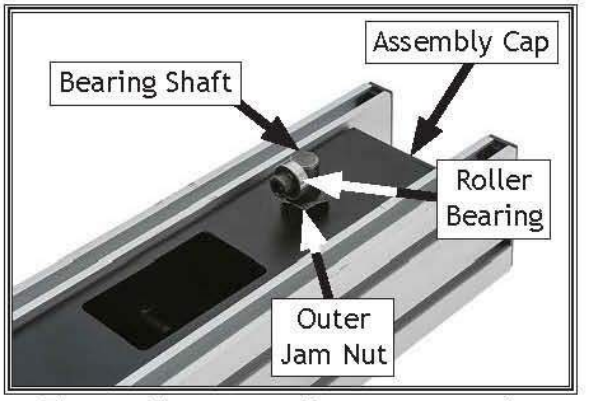


Figure 116. Rear adjustment area for leveling fence.

Fence Handle Clamping Pressure

1. Remove fence and lay it upside down.

2. Loosen knurled lock nut (see **Figure 117**).

3. Adjust set screw clockwise to increase clamping pressure of lock handle or counterclockwise to decrease clamping pressure.

4. Tighten knurled lock nut.

5. Re-install fence and check clamping pressure of lock handle.

6. Repeat **Steps 1-5** as necessary until satisfied.

Figure 117. Set screw for adjusting fence handle clamping pressure.

Calibrating Fence to Blade

Two set screws at the front of the fence position it parallel with the blade (see **Figure 118**). Follow the procedures below to check the fence/blade parallelism and adjust the fence if necessary. Perform this step *only* after **Adjusting Fence** on **Page 66.**

Tools Needed	**Qty**
Hex Wrench 4mm	1
Framing Square 24"	1

To check and adjust fence parallelism, do these steps:

1. DISCONNECT MACHINE FROM POWER!

2. Slide fence against right edge of miter slot, lock it in place, then raise blade fully. Using a ruler, examine how fence lines up with miter slot and blade (see **Figure 119**).

   — If fence *is* parallel with blade, no further adjustments need to be made.

   — If fence *is not* parallel with blade, proceed to **Step 3.**

3. Remove fence assembly from front rail.

4. Adjust two set screws on front of fence, as shown in **Figure 118.** Each set screw adjustment affects opposite side of fence.

5. Re-install fence assembly and measure parallelism with blade. Repeat **Step 4** as needed.

Figure 118. Location of set screws to adjust fence parallelism (shown upside down).

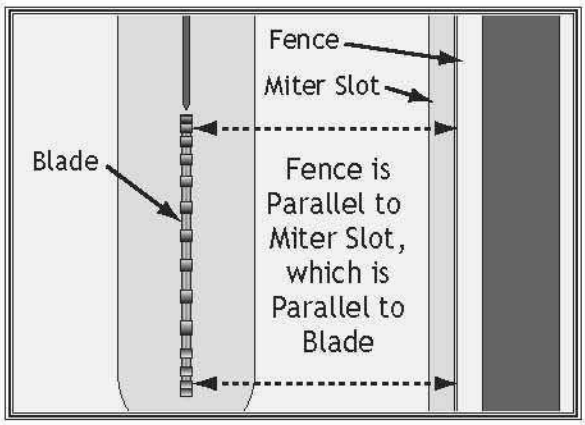


Figure 119. Checking fence parallelism with blade.

Offsetting Fence

Some woodworkers prefer to offset the rear of the fence $^{1}/_{64}$" from the blade, as shown in **Figure 120.**

The reason for this wider gap at the back side of the blade is to help prevent the chance of kickback and the blade burning the workpiece because a workpiece may be inconsistent. However, the trade-off is less accurate cuts, and if the fence is placed on the other side of the blade for other table saw operations, the potential of workpiece burning and kickback can be increased. Whenever using a fence, make sure that if an offset has been adjusted in the fence alignment, you use the fence on the side of the blade where the offset creates the wide gap.

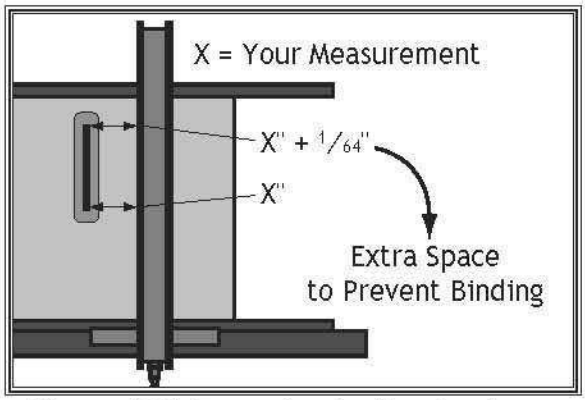


Figure 120. Example of adjusting fence with a $^{1}/_{64}$" offset.

Fence Scale Calibration

The fence scale windows, shown in **Figure 121**, can be calibrated with the fence scale by loosening the mounting screws and sliding them in the desired direction.

The indicator window on the right side is used when the fence is positioned to the right side of the blade. The indicator window on the left is used when the fence is positioned on the left side of the blade.

IMPORTANT: Do not use the fence on the left side of the blade if it has been purposely offset, and is not adjusted parallel with the blade.

Tools Needed	**Qty**
Phillips Head Screwdriver #2	1
Scrap Piece of Wood	1

To calibrate fence scale indicator windows, do these steps:

1. Lock fence at 13" and cut your scrap piece of wood.

2. Reposition and lock fence at 12", as indicated by the scale.

3. Flip over your scrap piece of wood, placing side that was cut in **Step 1** against fence, then make your cut.

4. Measure width of freshly cut workpiece at both ends with a tape measure. Workpiece width should be exactly 12" at front and back. If it is not, then adjust indicator window to match width of workpiece.

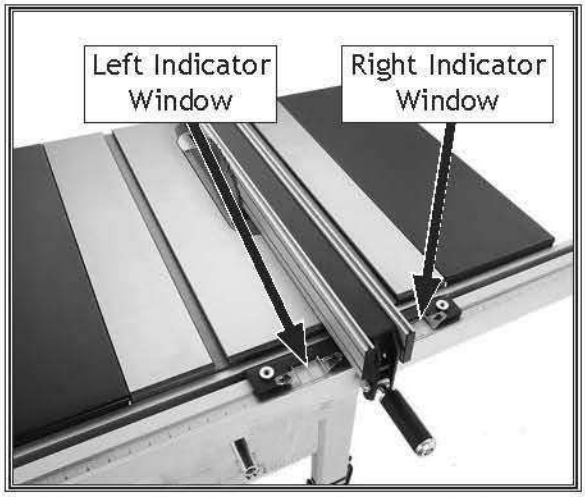


Figure 121. Fence indicator windows.

Table/Dado Insert Adjustment

The table/dado insert must sit perfectly flush with the table to provide a smooth, continuous surface for the workpiece to slide over. The insert is held in place by a magnet and sits on top of five adjustment screws (see **Figure 122**). The insert should be checked and adjusted any time it is removed and replaced, after prolonged use, or any time you notice the workpiece does not slide smoothly across the insert.

Tools Needed	**Qty**
Phillips Head Screwdriver #2	1
Straight Edge	1

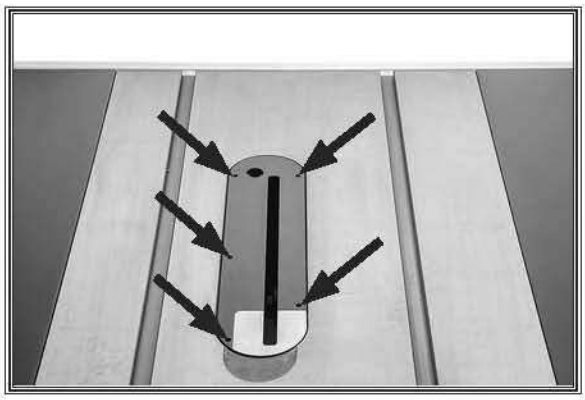


Figure 122. Location of table/dado insert holes with adjustment screws.

To check and adjust insert, do these steps:

1. DISCONNECT MACHINE FROM POWER!

2. Place straightedge across insert and check to make sure insert is flush with table at front and back of throat.

   —If insert is flush with table, no adjustments are necessary.

   —If insert is not flush with table, proceed to **Step 3**.

3. Insert screwdriver through holes shown in **Figure 122** and either loosen screws to raise insert, or tighten screws to lower it. Repeat **Steps 2-3** until insert is perfectly flush with surface of table.

Miter Gauge Adjustments

The miter gauge is equipped with stop screws that allow you to easily adjust the miter gauge 0°- 30° left, 90°, and 0°-45° right. The stop screws contact the shaft, which moves in or out of the way for adjustments.

Tools Needed	Qty
Phillips Head Screwdriver	1
90° Square	1
45° Square	1
30° Square	1
Wrench 8mm	1

Checking/Setting 90° Stops

1. DISCONNECT MACHINE FROM POWER!

2. Slide miter gauge into T-slot on table.

3. Place square evenly against face of miter gauge and blade, as shown in **Figure 123**.

   —If square touches miter body and body of blade evenly at same time, then it is square to blade. No adjustments are necessary.

   —If square does *not* touch miter body and blade evenly, then proceed to **Step 5**.

4. Remove miter gauge from miter slot.

5. Loosen two Phillips head screws that secure 90° stop plate (see **Figure 124**).

6. Using a square, position miter shaft at 90° to miter gauge body.

7. Tighten stop plate screws, then repeat **Step 3**.

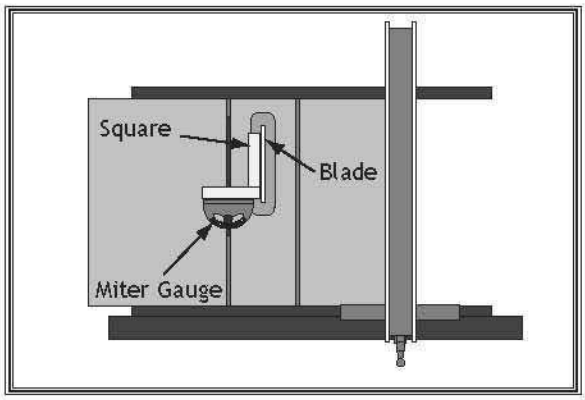


Figure 123. Checking 90° stop on miter gauge.

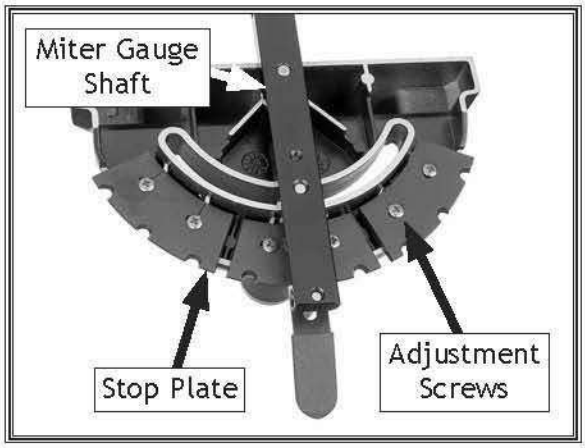


Figure 124. Checking 45° stop on miter gauge.

Checking/Setting 45° Stops

Follow the same process with the 45° and 30° stops that you followed with the 90°, except using a 45° square or adjustable square to verify that the miter body is 45° to the blade.

Belt Tension & Replacement

The drive belt stretches slightly as the saw is used. Most stretching will happen during the first 16 hours of use, but it may slightly continue with further use. If you notice that the saw is losing power in the middle of a cut, the belt may be slipping and will need to be tensioned. If, upon inspection, you find that the belt is cracked, frayed, or shows other signs of excessive wear or other damage, replace it immediately to ensure proper power transmission from the motor to the blade.

Tools Needed	Qty
Open-End or Socket Wrench 13mm	1

Tensioning Belt

1. DISCONNECT SAW FROM POWER!
2. Remove motor cover from side of machine.
3. Set blade to 0° on tilt scale, then raise or lower blade to approximately 2" above table.
4. Loosen blade tension hex bolt shown in **Figure 125.**
5. Use blade height handwheel to lower motor. When motor starts to pull blade down with it, belt is tensioned.
6. Retighten blade tension hex bolt, then re-install motor cover.

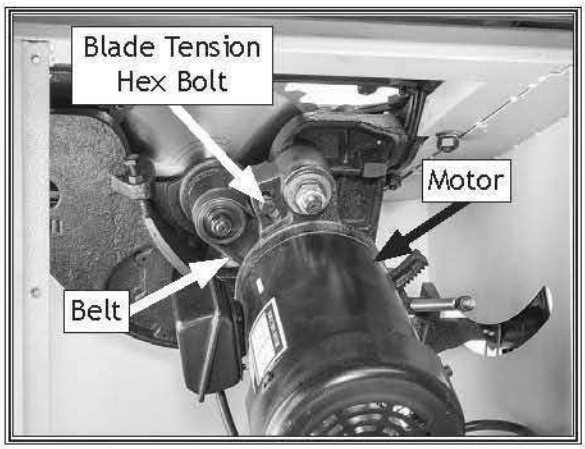


Figure 125. Components used to tension or remove belt.

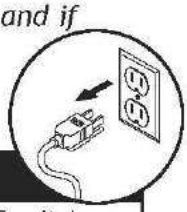
Replacing Belt

1. DISCONNECT MACHINE FROM POWER!
2. Remove motor cover from side of machine.
3. Set blade to 0° on tilt scale, then raise or lower blade to approximately 2" above table.
4. Loosen blade tension hex bolt, shown in **Figure 125.**
5. Use blade height handwheel to raise motor and loosen belt, then remove belt.
6. Install new belt onto pulleys. Lower motor until it begins to pull blade down with it, then retighten blade tension hex bolt.
7. Re-install motor cover.

Troubleshooting

The following troubleshooting tables cover common problems that may occur with this machine. If you need replacement parts or additional troubleshooting help, contact our Technical Support.

Note: *Before contacting Tech Support, find the machine serial number and manufacture date, and if available, your original purchase receipt. This information is required to properly assist you.*



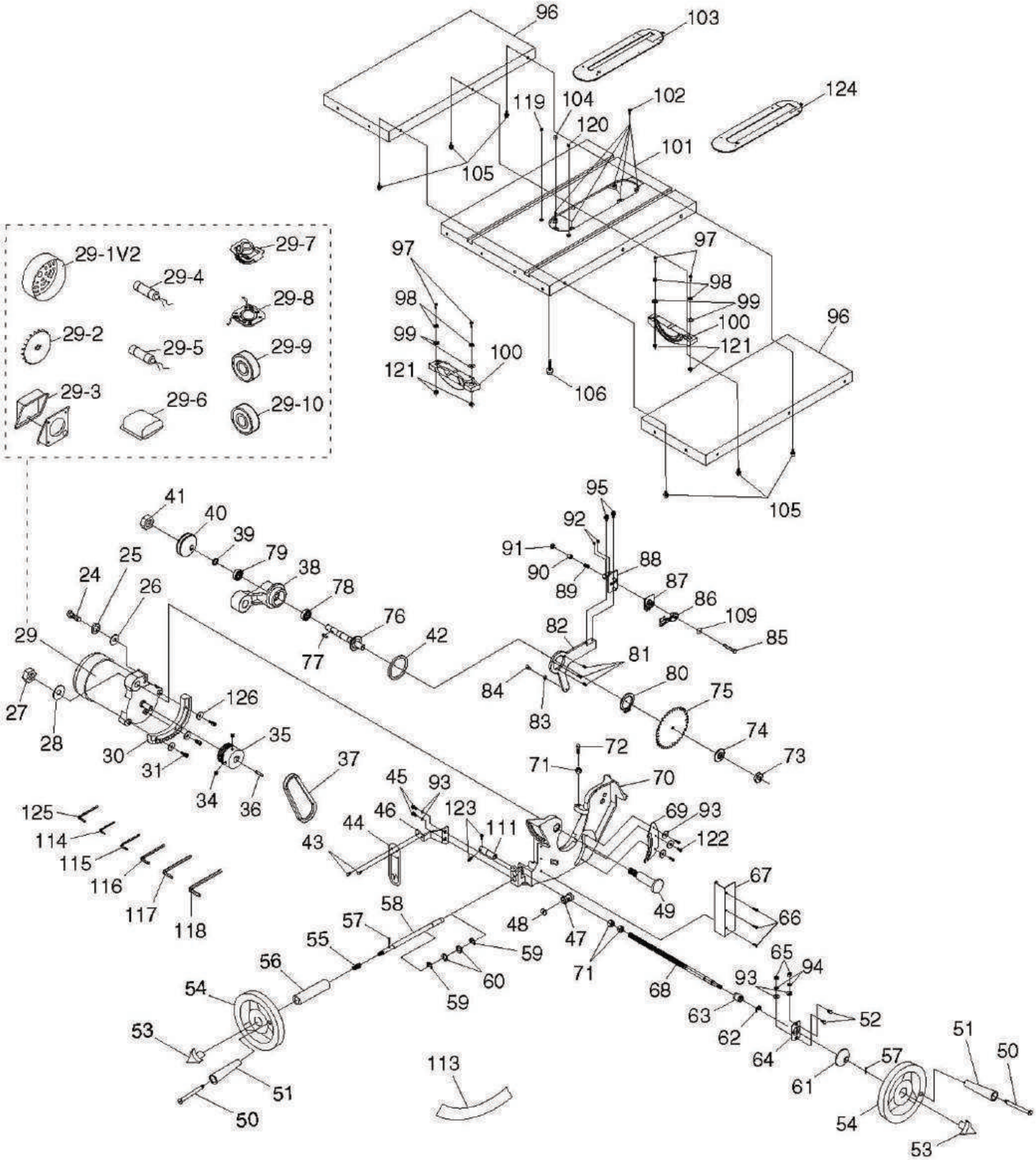
Motor & Electrical

PROBLEM	POSSIBLE CAUSE	CORRECTIVE ACTION
Machine does not start or a breaker trips.	1. Switch disabling key not installed. 2. Wall circuit breaker tripped or fuse blown. 3. Power supply switched OFF or at fault. 4. Plug/receptacle at fault/wired wrong. 5. Motor wired incorrectly. 6. Wiring open/has high resistance. 7. Motor ON/OFF switch at fault. 8. Start capacitor at fault. 9. Motor at fault.	1. Insert switch disabling key into ON/OFF switch. 2. Ensure circuit size is correct; replace weak breaker or blown fuse. 3. Ensure power supply is on/has correct voltage. 4. Test for good contacts; correct the wiring. 5. Correct motor wiring connections. 6. Check/fix broken, disconnected, or corroded wires. 7. Replace switch. 8. Test/replace if faulty. 9. Test/repair/replace.
Machine stalls or is underpowered.	1. Feed rate/cutting speed too fast. 2. Workpiece material unsuitable for machine. 3. Workpiece crooked; fence mis-adjusted. 4. Machine undersized for task; wrong blade. 5. Run capacitor at fault. 6. Belt slipping. 7. Motor wired incorrectly for voltage. 8. Plug/receptacle at fault. 9. Pulley slipping on shaft. 10. Motor bearings at fault. 11. Motor overheated. 12. Motor at fault.	1. Decrease feed rate/cutting speed. 2. Only cut wood; ensure moisture is below 20%. 3. Straighten or replace workpiece; adjust fence. 4. Use correct blade; reduce feed rate or depth of cut. 5. Test/repair/replace. 6. Tension/replace belt 7. Wire motor correctly for power supply voltage. 8. Test for good contacts/correct wiring. 9. Secure loose pulley; replace if damaged. 10. Test/repair/replace. 11. Clean motor, let cool, and reduce workload. 12. Test/repair/replace.
Machine has vibration or noisy operation.	1. Blade at fault. 2. Belt worn or loose. 3. Pulley loose. 4. Motor mount loose/broken. 5. Motor fan cover dented. 6. Arbor bearings at fault. 7. Motor bearings at fault.	1. Replace warped/bent blade; resharpen dull blade. 2. Tension/replace belt 3. Realign/replace shaft, pulley, set screw, and key. 4. Tighten/replace. 5. Fix dent; re-adjust position of fan cover. 6. Replace arbor housing bearings; replace arbor. 7. Test by rotating shaft; grinding/loose shaft requires bearing replacement.

PROBLEM	POSSIBLE CAUSE	CORRECTIVE ACTION
Rip fence does not move smoothly.	1. Rip fence or rails mounted incorrectly. 2. Rails dirty or sticky. 3. Clamp screw is out of adjustment.	1. Remount rip fence or rails. 2. Clean rails. 3. Adjust clamp screw.
Material moves away from fence when ripping.	1. Rip fence misaligned.	1. Check and adjust rip fence.
Blade is not aligned with miter slot or fence.	1. Blade is warped. 2. Table top is not parallel with blade. 3. Fence is not parallel with blade.	1. Replace blade 2. Adjust table parallel with blade 3. Adjust fence parallel with blade
Blade does not reach 90°.	1. 90° stop nuts are out of adjustment. 2. Sawdust or debris stuck in trunnion slides or on stop nuts.	1. Adjust 90° stop nuts 2. Clean sawdust or debris out of trunnion slides or off stop nuts.
Blade hits insert at 45°, or blade too close to insert.	1. 45° limiting block is out of adjustment. 2. Slot in table insert is too small. 3. Table out of alignment/adjustment with blade. 4. Blade position on arbor is incorrect.	1. Adjust 45° limiting block 2. File/mill slot in table insert; use dedicated zero clearance for 45° cuts. 3. Align table to the blade 4. Verify that blade arbor washers are correct and in the required position.
Board binds or burns when feeding through saw.	1. Dull blade. 2. Blade is warped. 3. Fence is not parallel with blade. 4. Table top is not parallel with blade.	1. Replace blade 2. Replace blade 3. Adjust fence parallel with blade 4. Adjust table parallel with blade
Handwheel binds or is difficult to move.	1. Lock knob is engaged. 2. Handwheel shaft pins are wedged.	1. Loosen lock knob. 2. Remove handwheel and adjust shaft pins.
Blade will not go beneath table surface.	1. Roll pin/set screw in worm gear contacting geared trunnion. 2. Debris lodged between trunnion castings.	1. Tighten roll pins and set screws in the worm gear. 2. Remove debris.
Blade will not move up or down.	1. Set screw on worm gear is loose or missing.	1. Tighten or replace set screw.
Too much sawdust blown back toward operator.	1. Blade guard has been removed. 2. Too many air leaks in cabinet for proper dust collection. 3. Dust collection system clogged or airflow CFM is insufficient; too weak. 4. Fence not parallel with blade (pressure at blade backside). 5. Miter slot/fence not parallel with blade at 90°.	1. Re-install blade guard for maximum safety and dust control. 2. Seal leaks in cabinet or around dust chute. 3. Remove clog; revise ducting layout for improved suction; use a stronger dust collector. 4. Adjust fence parallel with blade 5. Adjust table so miter slot is parallel with blade at 90°
Workpiece catches on table insert when cutting.	1. Table/dado insert out of adjustment.	1. Adjust table/dado insert so it is perfectly flush with table surface

PARTS

Main



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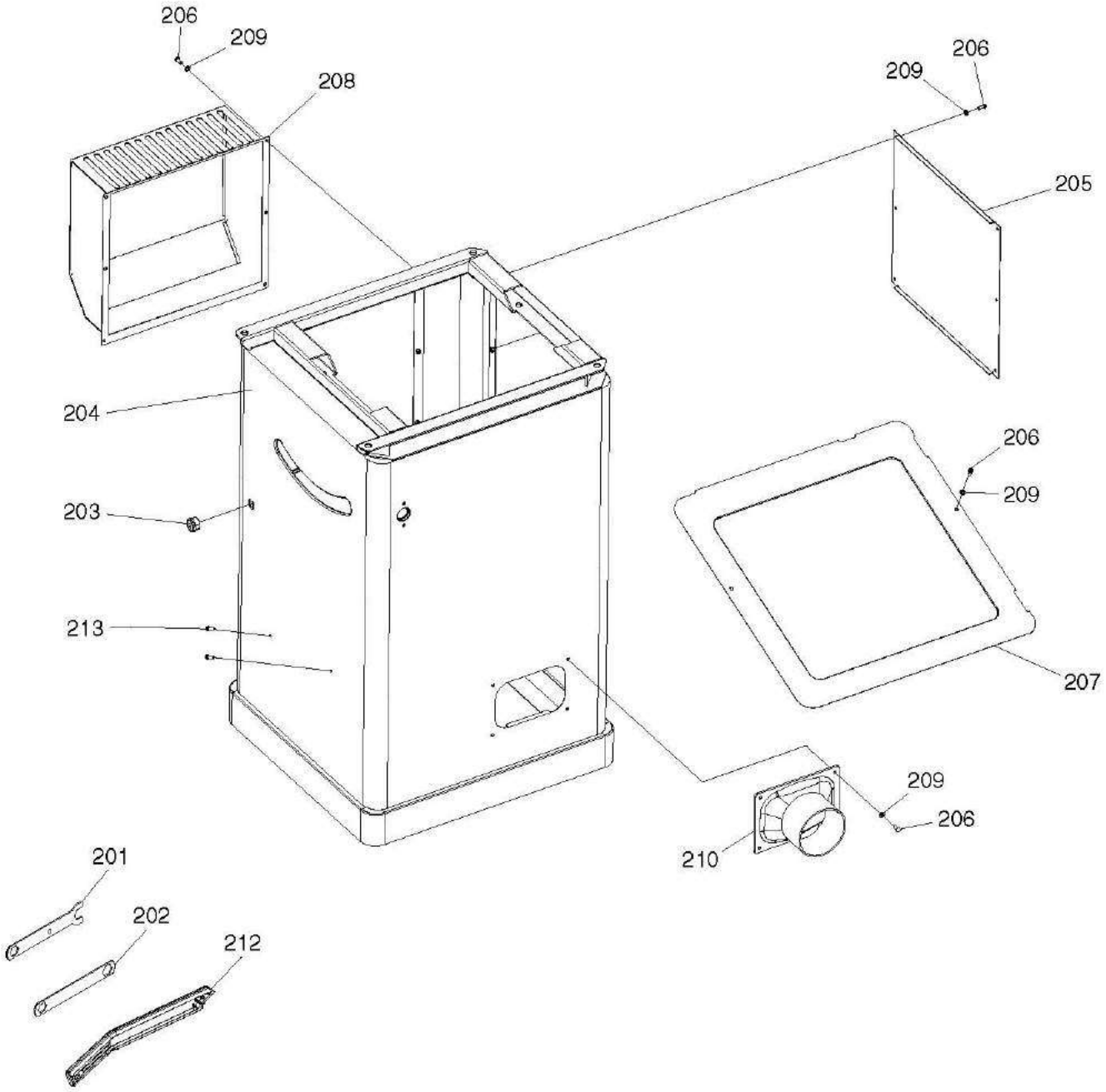
Main Parts List

REF	DESCRIPTION
24	HEX BOLT M8-1.25 X 30
25	LOCK WASHER 8MM
26	FLAT WASHER 8MM
27	LOCK NUT M16-2
28	FLAT WASHER 16MM
29	MOTOR 2HP 110V/220V 1-PH
29-1V2	MOTOR FAN COVER V2.06.19
29-2	MOTOR FAN
29-3	MOTOR JUNCTION BOX
29-4	R CAPACITOR 30M 350V 1-5/8 X 3-1/8
29-5	S CAPACITOR 200M 250V 1-3/8 X 2-11/16
29-6	CAPACITOR COVER
29-7	CENTRIFUGAL SWITCH
29-8	CONTACT PLATE
29-9	BALL BEARING 6203-2RS
29-10	BALL BEARING 6202-2RS
30	BULL GEAR
31	CAP SCREW M6-1 X 25
34	SET SCREW M5-.8 X 8
35	MOTOR PULLEY J6 X 5/8" BORE
36	KEY 5 X 5 X 30
37	POLY-V BELT 355J6
38	BLADE BRACKET
39	ARBOR BUSHING
40	ARBOR PULLEY
41	LOCK NUT M12-1.5
42	SHIM WASHER
43	PHLP HD SCR M4-.7 X 6
44	BEVEL INDICATOR
45	CAP SCREW M5-.8 X 8
46	POINTER SEAT
47	BEVEL NUT
48	SHIM WASHER
49	MAIN TRUNNION SHAFT
50	HANDLE BOLT M8-1.25 X 120
51	HANDWHEEL HANDLE 106MM SS
52	CAP SCREW M5-.8 X 16
53	LOCK HANDLE M8-1.25
54	HNDWHL TYPE-1 180D X 11B-K X M8-1.25
55	COMPRESSION SPRING
56	ELEVATION BUSHING
57	ROLL PIN 3 X 20
58	ELEVATION SHAFT
59	E-CLIP 14MM
60	SPACER
61	BEVEL PLATE
62	E-CLIP 9MM
63	SWIVEL BEARING
64	BEARING SEAT
65	HEX NUT M5-.8
66	CAP SCREW M5-.8 X 10
67	BLADE GUARD
68	TILT SHAFT
69	RIVING GUIDE

REF	DESCRIPTION
70	MAIN TRUNNION
71	HEX NUT M8-1.25
72	HEX BOLT M8-1.25 X 40
73	HEX NUT 5/8-18
74	BLADE FLANGE
75	BLADE 10" X 5/8" X 40T
76	ARBOR
77	KEY 5 X 5 X 12
78	BALL BEARING 6203-2RS
79	BALL BEARING 6202-2RS
80	EXT RETAINING RING 52MM
81	CAP SCREW M5-.8 X 6
82	MOUNTING PLATE
83	BUSHING
84	SHAFT PIN
85	RIVING CLAMP LOCK BOLT M8-1.25 X 53
86	RIVING LOCK LEVER
87	RIVING CLAMP
88	RIVING DECK
89	COMPRESSION SPRING
90	RIVING SEAT
91	LOCK NUT M8-1.25
92	SET SCREW M5-.8 X 10
93	FLAT WASHER 5MM
94	LOCK WASHER 5MM
95	CAP SCREW W/WASHER M5-.8 X 16
96	EXTENSION TABLE
97	CAP SCREW M10-1.5 X 40
98	LOCK WASHER 10MM
99	FLAT WASHER 10MM
100	TRUNNION
101	MAIN TABLE
102	FLAT HD SCR 8-32 X 1/2
103	TABLE INSERT
104	TABLE INSERT MAGNET
105	CAP SCREW M10-1.5 X 30
106	FLANGE BOLT M8-1.25 X 16
109	FLAT WASHER 8MM
111	90° LIMITING BLOCK
113	BEVEL LABEL
114	HEX WRENCH 3MM
115	HEX WRENCH 4MM
116	HEX WRENCH 5MM
117	HEX WRENCH 6MM
118	HEX WRENCH 8MM
119	SET SCR M8-1.25 X 20 CUP-PT NYLOCK
120	SET SCR M8-1.25 X 25 CUP-PT NYLOCK
121	HEX NUT M10-1.5
122	CAP SCREW M5-.8 X 10
123	CAP SCREW M5-.8 X 10
124	DADO TABLE INSERT
125	HEX WRENCH 2.5MM
126	FLAT WASHER 6MM

Cabinet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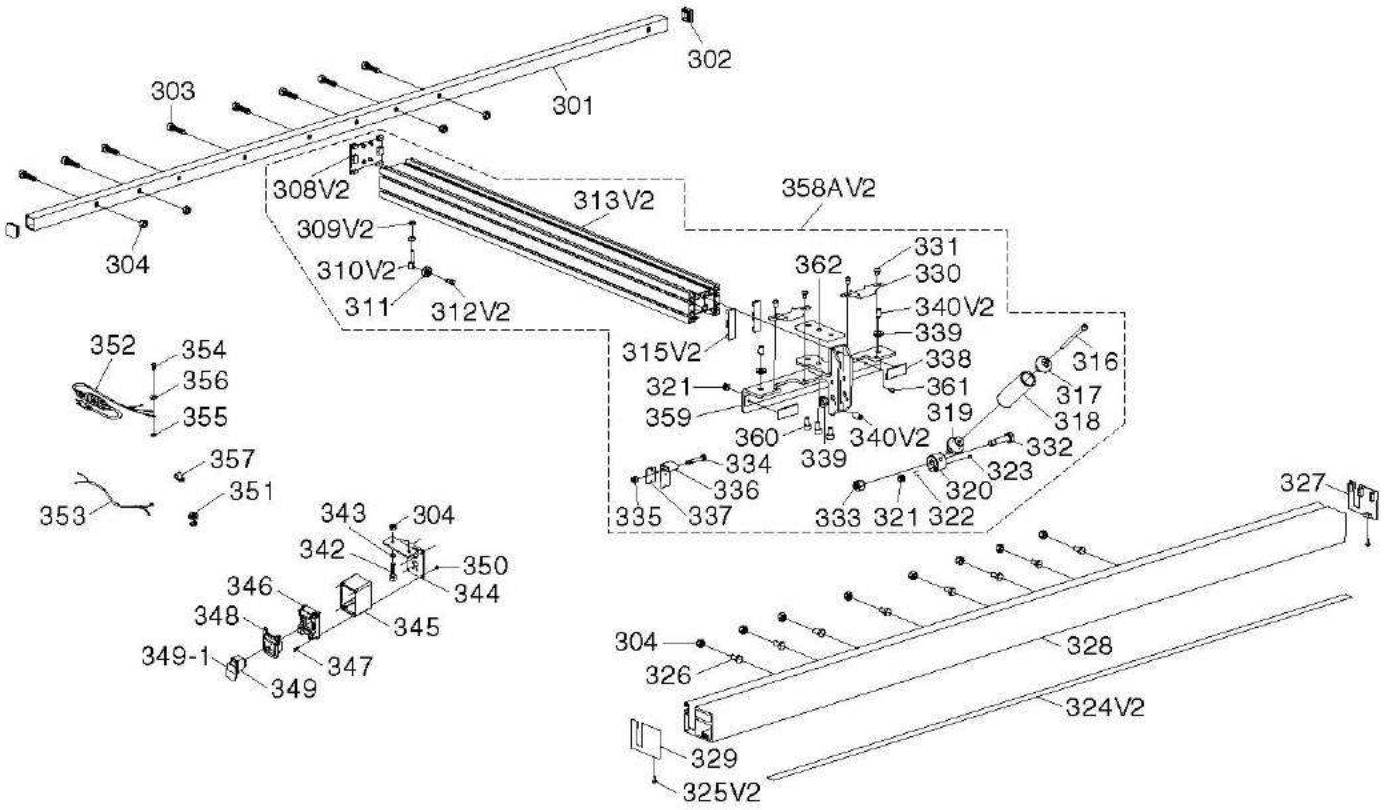
Cabinet Parts List

REF	DESCRIPTION
201	ARBOR WRENCH 16 X 23MM OPEN-END
202	ARBOR WRENCH 13 X 22MM CLOSED-ENDS
203	STRAIN RELIEF 1/2"-3/8" SNAP-IN ST
204	CABINET
205	REAR PANEL
206	BUTTON HD CAP SCR M5-.8 X 12

REF	DESCRIPTION
207	DUST COLLECTION GUIDE PLATE
208	MOTOR COVER
209	FLAT WASHER 5MM
210	DUST PORT
212	PUSH STICK
213	PHLP HD SCR M3-.5 X 16

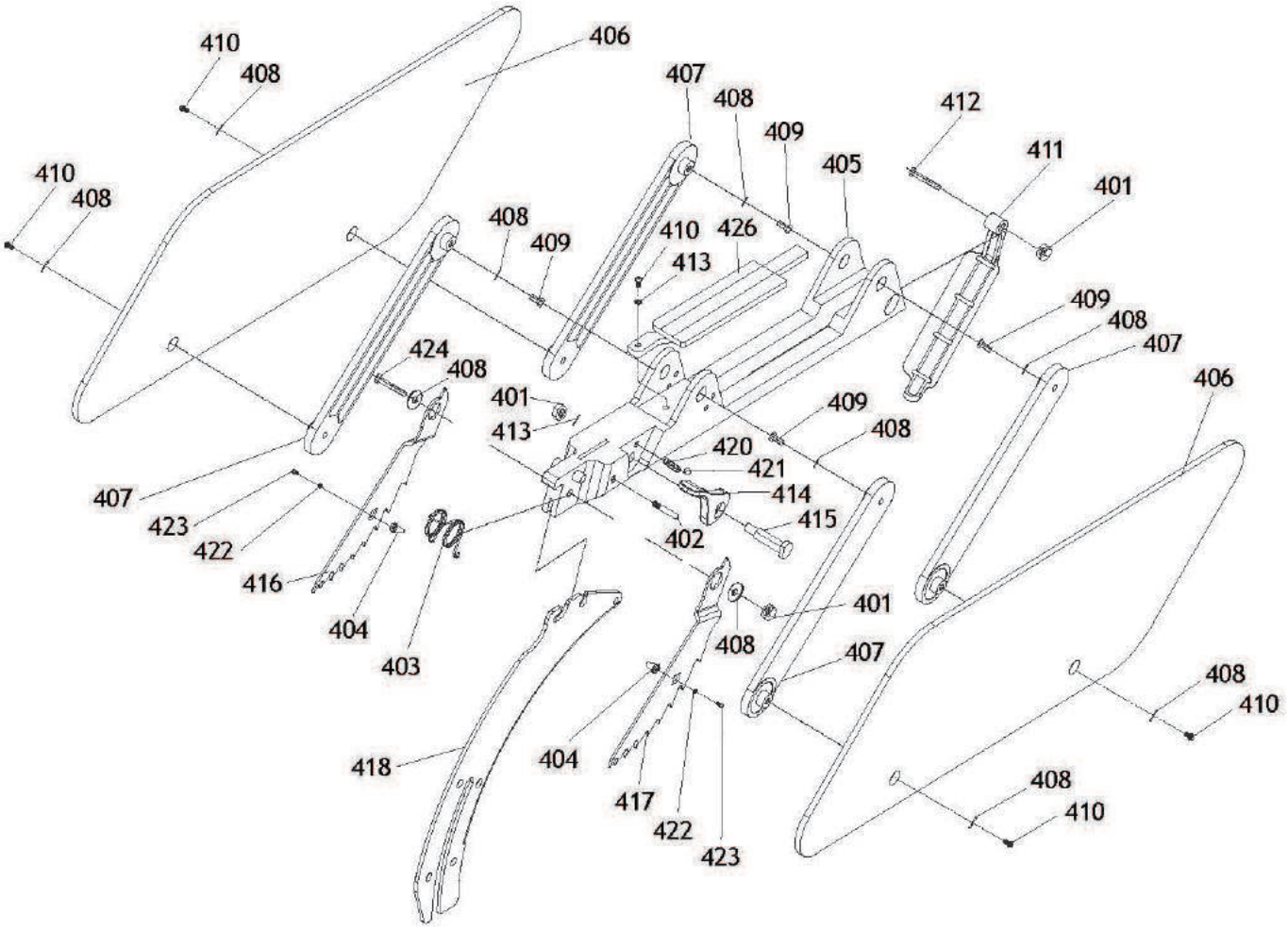
Fence & Rails



REF	DESCRIPTION
301	REAR RAIL
302	REAR RAIL CAP
303	CAP SCREW M8-1.25 X 25
304	HEX NUT M8-1.25
308V2	FENCE ASSEMBLY CAP V2.06.19
309V2	HEX NUT M6-1 V2.06.19
310V2	LIMIT SHAFT M6-1 V2.06.19
311	BALL BEARING 696-2RS
312V2	CAP SCREW M5-.8 X 12 V2.06.19
313V2	FENCE BASE V2.06.19
315V2	FENCE FACE CAP V2.06.19
316	CAP SCREW M8-1.25 X 85
317	FENCE HANDLE END COVER
318	FENCE HANDLE 19ID X 32OD X 90L
319	HANDLE BASE SCR M8-1.25 X 8, 11 X 11
320	FENCE HANDLE CAM
321	SET SCREW M8-1.25 X 8
322	COMPRESSION SPRING 0.8 X 5 X 15
323	STEEL BALL 6MM
324V2	SCALE LABEL 1620 X 20MM V2.08.17
325V2	TAP SCREW 3.5 X 9.5 V2.06.19
326	HEX BOLT M8-1.25 X 25
327	FRONT RAIL CAP (RIGHT)
328	FRONT RAIL
329	FRONT RAIL CAP (LEFT)
330	INDICATOR
331	PHLP HD SCREW M6-1 X 8
332	HEX BOLT M10-1.5 X 45
333	LOCK NUT M10-1.5

REF	DESCRIPTION
334	HEX BOLT M6-1 X 40
335	LOCK NUT M6-1
336	SPRING PLATE
337	SLIDE PLATE
339	KNURLED NUT M10-1.5
340V2	SET SCREW M10-1.5 X 17, PT V2.05.18
342	HEX BOLT M8-1.25 X 16
343	LOCK WASHER 8MM
344	SWITCH BRACKET
345	SWITCH BOX
346	SWITCH PANEL
347	TAP SCREW M4.2 X 20
348	SWITCH PADDLE
349	SWITCH KEDU HY18-20
349-1	SWITCH KEY
350	TAP SCREW M4.2 X 13
351	STRAIN RELIEF 1/2"-3/8" SNAP-IN ST
352	POWER CORD 14G 3W 72" 5-15P
353	MOTOR CORD 14G 3W 39"
354	PHLP HD SCR M5-.8 X 8
355	LOCK WASHER 5MM
356	INT TOOTH WASHER 5MM
357	ADJUSTABLE CABLE CLAMP
358AV2	FENCE ASSEMBLY W/O RAILS V2.06.19
359	FENCE FIXED SEAT
360	CAP SCREW M8-1.25 X 16
361	TAP SCREW M4.2 X 13
362	FENCE PLATE

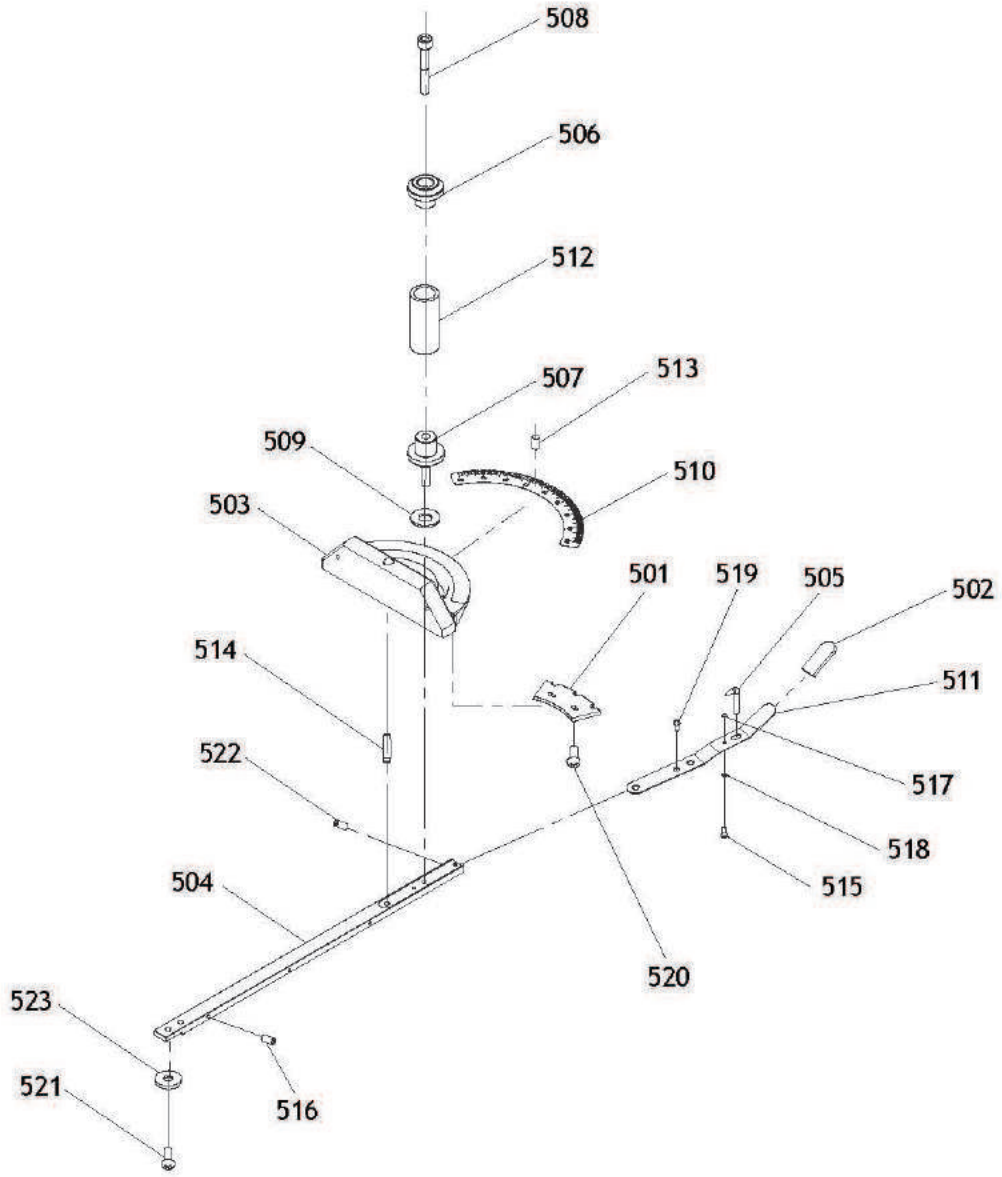
Blade Guard



REF	DESCRIPTION
401	LOCK NUT M5-.8
402	SET PIN
403	TORSION SPRING
404	SCREW CAP
405	BLADE GUARD BODY
406	BARRIER
407	BARRIER CONNECTING BAR
408	FLAT WASHER 5MM
409	HEX BOLT M5-.8 X 10
410	PHLP HD SCR M5-.8 X 10
411	GUARD RAIL
412	PHLP HD SCR M5-.8 X 25

REF	DESCRIPTION
413	FLAT WASHER 5MM
414	BLADE GUARD LOCK LEVER
415	BLADE GUARD LOCK LEVER SCREW
416	ANTI-KICKBACK PAWL (L)
417	ANTI-KICKBACK PAWL (R)
418	SPREADER/RIVING KNIFE
420	COMPRESSION SPRING
421	STEEL BALL 4MM
422	FLAT WASHER 3MM
423	TAP SCREW M3 X 6
424	CAP SCREW M5-.8 X 30
426	BLADE GUARD WINDOW COVER

Miter Gauge



REF	DESCRIPTION
501	FLAT PLATE
502	SPRING PLATE COVER
503	MITER GAUGE BODY
504	MITER BAR
505	ANGLE INDICATOR
506	UPPER HANDLE CAP
507	LOWER HANDLE CAP
508	CAP SCREW M8-1.25 X 50
509	HANDLE WASHER 6 X 20
510	MITER SCALE
511	SPRING PLATE
512	MITER HANDLE

REF	DESCRIPTION
513	RIVET 2 X 5MM
514	MITER PIN
515	FLAT HD SCR 4-40 X 3/16
516	SET SCREW 10-24 X 1/2
517	THREADED STOP PIN
518	FLAT WASHER 3MM
519	PHLP HD SCR 10-32 X 1/4
520	PHLP HD SCR 6-32 X 7/16
521	FLAT HD SCR 1/4-28 X 5/16
522	SET SCREW 10-32 X 1/4
523	MITER BAR GUIDE WASHER