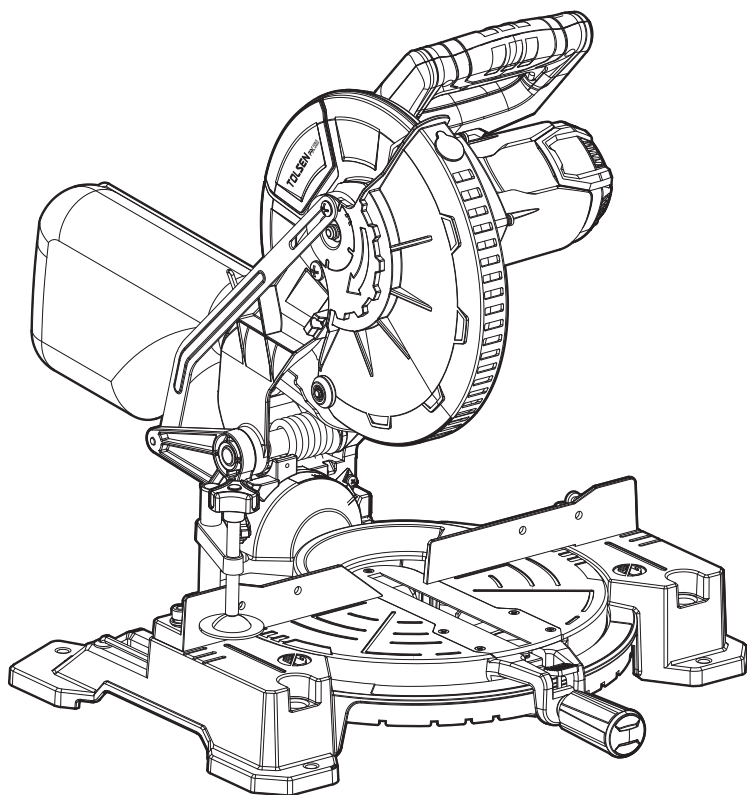


TOLSEN FORCE XPRESS

79818 MITRE SAW

INSTRUCTION MANUAL

110-120V~60Hz 1800W 15A



SAVE THIS MANUAL !

You will need this manual for safety instructions, operating procedures and warranty.
Put it and the original sales receipt in a safe dry place for future reference.

IMPORTANT SAFETY INFORMATION

General power tool safety warnings

WARNING!

Read all safety warnings and instructions. Failure to follow the warnings and instructions may result in electric shock, fire and/or serious injury. Save all warnings and instructions for future reference.

1. **KEEP GUARDS IN PLACE** and in working order.
2. **REMOVE ADJUSTING KEYS AND WRENCHES.** Form habit of checking to see that keys and adjusting wrenches are removed from tool before turning it on.
3. **KEEP WORK AREA CLEAN.** Cluttered areas and benches invite accidents.
4. **DON'T USE IN DANGEROUS ENVIRONMENT.** Don't use power tools in damp or wet locations, or expose them to rain. Keep work area well lighted.
5. **KEEP CHILDREN AWAY.** All visitors should be kept safe distance from work area.
6. **MAKE WORKSHOP KID PROOF** with padlocks, master switches, or by removing starter keys.
7. **DON'T FORCE TOOL.** It will do the job better and safer at the rate for which it was designed.
8. **USE RIGHT TOOL.** Don't force tool or attachment to do a job for which it was not designed.
9. **USE PROPER EXTENSION CORD.** Make sure your extension cord is in good condition. When using an extension cord, be sure to use one heavy enough to carry the current your product will draw. An undersized cord will cause a drop in line voltage resulting in loss of power and overheating. Table A shows the correct size to use depending on cord length and nameplate ampere rating. If in doubt, use the next heavier gauge. The smaller the gauge number, the heavier the cord.
10. **WEAR PROPER APPAREL.** Do not wear loose clothing, gloves, neckties, rings, bracelets, or other jewelry which may get caught in moving parts. Nonslip footwear is recommended. Wear protective hair covering to contain long hair.
11. **ALWAYS USE SAFETY GLASSES.** Also use face or dust mask if cutting operation is dusty. Everyday eyeglasses only have impact resistant lenses, they are NOT safety glasses.
12. **SECURE WORK.** Use clamps or a vise to hold work when practical. It's safer than using your hand and it frees both hands to operate tool.
13. **DON'T OVERREACH.** Keep proper footing and balance at all times.
14. **MAINTAIN TOOLS WITH CARE.** Keep tools sharp and clean for best and safest performance. Follow instructions for lubricating and changing accessories.
15. **DISCONNECT TOOLS** before servicing; when changing accessories, such as blades, bits, cutters, and the like.
16. **REDUCE THE RISK OF UNINTENTIONAL STARTING.** Make sure switch is in off position before plugging in.
17. **USE RECOMMENDED ACCESSORIES.** Consult the owner's manual for recommended accessories. The use of improper accessories may cause risk of injury to persons.
18. **NEVER STAND ON TOOL.** Serious injury could occur if the tool is tipped or if the cutting tool is unintentionally contacted.
19. **CHECK DAMAGED PARTS.** Before further use of the tool, a guard or other part that is damaged should be carefully checked to determine that it will operate properly and perform its intended function – check for alignment of moving parts, binding of moving parts, breakage of parts, mounting, and any other conditions that may affect its operation. A guard or other part that is damaged should be properly repaired or replaced.
20. **DIRECTION OF FEED.** Feed work into a blade or cutter against the direction of rotation of the blade or cutter only.
21. **NEVER LEAVE TOOL RUNNING UNATTENDED. TURN POWER OFF.** Don't leave tool until it comes to a complete stop.

Miter saw safety warnings

For Your Own Safety Read Instruction Manual Before Operating Miter Saw.

1. Wear eye protection.
2. Keep hands out of path of saw blade.
3. Do not operate saw without guards in place.
4. Do not perform any operation freehand.
5. Never reach around saw blade.
6. Turn off tool and wait for saw blade to stop before moving workpiece or changing settings.
7. Disconnect power before changing blade or servicing.
8. To reduce risk of injury, return carriage to the full rear position after each crosscut operation.
9. Return all guards to original position if any are moved during blade replacement. Check all guards for proper operation after service.
10. The lock down pin is to be used only to lock the head in place for carrying and storage. It is not to be used for any cutting operation.
11. **DANGER!** Coasting Cutting Tool Can Be Dangerous – Apply brake immediately to stop cutting tool when the switch is turned off.
12. The torque developed during braking may loosen the blade-retaining nut/bolt. The blade retaining nut/bolt should be checked periodically and tightened if necessary, especially after braking.
13. Always use blades with correct size and shape (diamond versus round) of arbor holes. Blades that do not match the mounting hardware of the saw will run eccentrically, causing loss of control.
14. Never use damaged or incorrect blade washers or bolt. The blade washers and bolt were specially designed for your saw, for optimum performance and safety of operation.
15. Do not use to cut logs, tree limbs, or uneven lumber.
16. Wet lumber, green (unseasoned) lumber, and pressure treated lumber all have an increased potential for kickback and should only be cut with a blade for cutting that lumber type. Wear a NIOSH approved respirator and have appropriate ventilation whenever cutting pressure treated lumber.
17. Do not use blades made from high-speed steel, abrasive blades, metal-cutting blades or masonry-cutting blades. The guards of this saw are not designed to protect against the failure of such blades.
18. Blades must be rated to at least the maximum speed marked on the tool.
19. **DO NOT OPERATE WITH ANY GUARD DISABLED, DAMAGED, OR REMOVED.** Moving guards must move freely and close instantly.
20. The use of accessories or attachments not recommended by the manufacturer may result in a risk of injury to persons.
21. When servicing use only identical replacement parts.
22. Do not depress the spindle lock when starting or during operation.
23. Only use safety equipment that has been approved by an appropriate standards agency. Unapproved safety equipment may not provide adequate protection.
24. Stay alert, watch what you are doing and use common sense when operating a power tool. Do not use a power tool while you are tired or under the influence of drugs, alcohol or medication. A moment of inattention while operating power tools may result in serious personal injury.
25. Maintain labels and nameplates on the tool. These carry important safety information. If unreadable or missing, contact TOLSEN Tools for a replacement.
26. Avoid unintentional starting. Prepare to begin work before turning on the tool.
27. People with pacemakers should consult their physician(s) before use. Electromagnetic fields in close proximity to heart pacemaker could cause pacemaker interference or pacemaker failure.
28. The warnings, precautions, and instructions discussed in this instruction manual cannot cover all possible conditions and situations that may occur. It must be understood by the operator that common sense and caution are factors which cannot be built into this product, but must be supplied by the operator.

Vibration safety

This tool vibrates during use. Repeated or long-term exposure to vibration may cause temporary or permanent physical injury, particularly to the hands, arms and shoulders. To reduce the risk of vibration-related injury:

1. Anyone using vibrating tools regularly or for an extended period should first be examined by a doctor and then have regular medical check-ups to ensure medical problems are not being caused or worsened from use. Pregnant women or people who have impaired blood circulation to the hand, past hand injuries, nervous system disorders, diabetes, or Raynaud's Disease should not use this tool. If you feel any medical or physical symptoms related to vibration (such as tingling, numbness, and white or blue fingers), seek medical advice as soon as possible.
2. Do not smoke during use. Nicotine reduces the blood supply to the hands and fingers, increasing the risk of vibration-related injury.
3. Use tools with the lowest vibration when there is a choice between different processes.
4. Include vibration-free periods each day of work.
5. Grip tool as lightly as possible (while still keeping safe control of it). Let the tool do the work.
6. To reduce vibration, maintain the tool as explained in this manual. If any abnormal vibration occurs, stop use immediately

SPECIFICATIONS

Electrical Rating		110-120VAC ~ 60Hz
In Put Power		1800W
Max.Current		15A
Motor No Load Speed		n ₀ : 5000/min
Max. Accessory Diameter		Φ255mm
Arbor		5/8"
Cutting Capacities	90° x 0°	140 x 70mm
	45° x 0°	95 x 70mm
	90° x 45°	140x40mm
	45° x 45°	95x40mm



⚠ Caution! Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

⚠ Caution! The use of optical instruments with this product will increase eye hazard.

OPERATION

Setup - before use



Read the **ENTIRE IMPORTANT SAFETY INFORMATION** section at the beginning of this manual including all text under subheadings therein before set up or use of this product.

⚠ WARNING

TO PREVENT SERIOUS INJURY FROM ACCIDENTAL OPERATION: Turn the Power Switch of the tool off and unplug the tool from its electrical outlet before performing any procedure in this section.

Note: For additional information regarding the parts listed in the following pages, refer to the Assembly Diagram near the end of this manual.

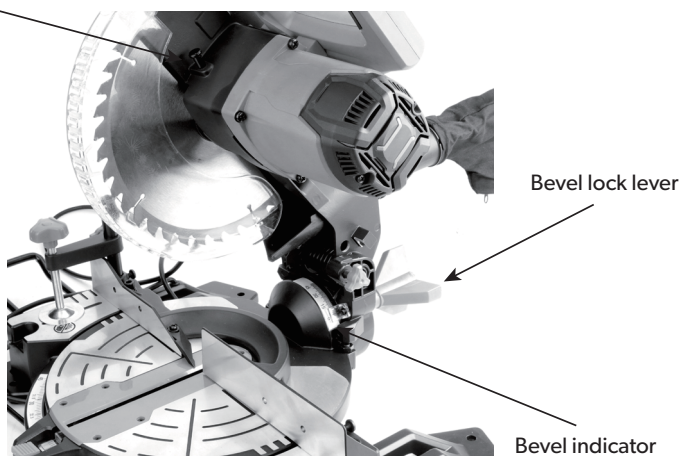
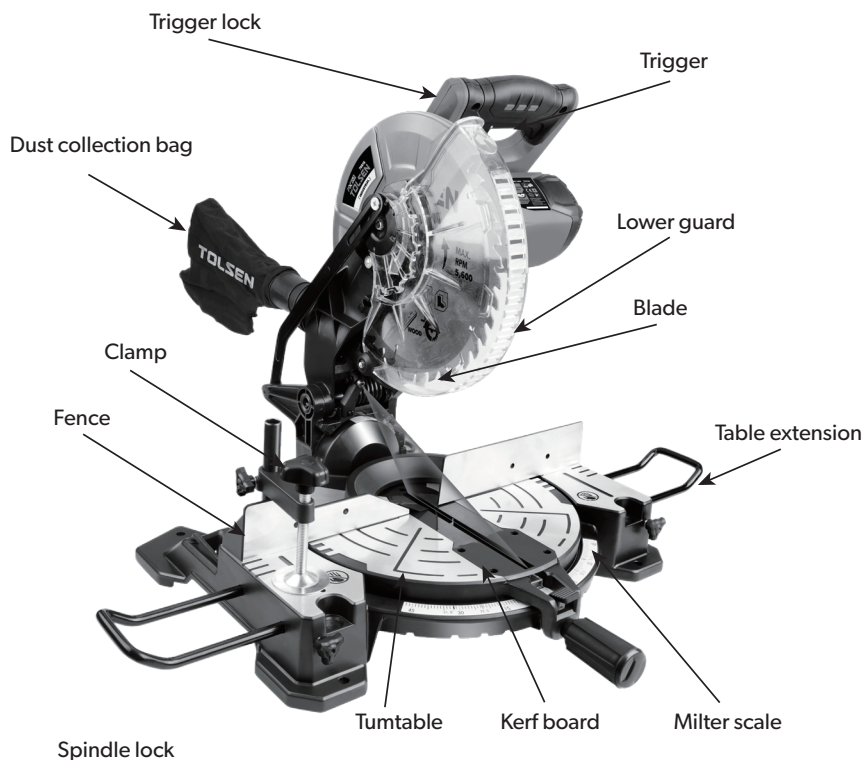
Assembly

1. Insert the ends of the Table Extensions into the holes in the sides of the Base. Tighten the Wing Screws to hold the Extensions in place. The upper edge of the Extensions will be level with the surface of the saw. This provides a wider base for the work material to rest on.
2. Thread the Miter Knob into the end of the table above the Miter Lock until securely in place.
3. Slip the Dust Collection Bag over the Dust Outlet behind the saw.

Mounting

Use the four bolt holes provided in the Base to mount the Miter Saw to a stable support before use. Mounting hardware not included.

FUNCTIONS



OPERATING INSTRUCTIONS



Read the ENTIRE IMPORTANT SAFETY INFORMATION section at the beginning of this manual including all text under subheadings therein before set up or use of this product.

Tool set up

⚠WARNING

TO PREVENT SERIOUS INJURY FROM ACCIDENTAL OPERATION: Turn the Power Switch of the tool off and unplug the tool from its electrical outlet before performing any procedure in this section.

TO PREVENT SERIOUS INJURY: DO NOT OPERATE WITH ANY GUARD DISABLED, DAMAGED, OR REMOVED. Moving guards must move freely and close instantly.

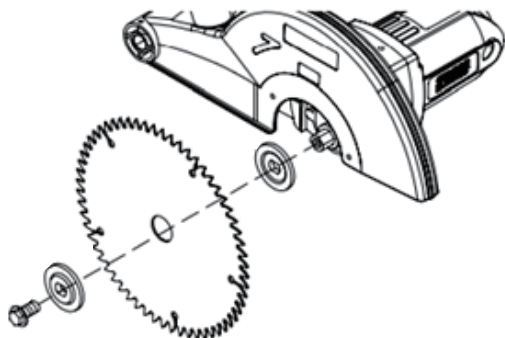
Replacing the blade

Note: Blade sold separately.

1. Unplug the tool from its power source.
2. Raise the Lower Guard out of the way and hold it up.
3. Loosen the Guard Pivot Bolt until it disengages the Guard Pivot Plate.
4. Swing the Guard Pivot Plate up and out of the way.
5. Press in the Spindle Lock on the back of the saw's head and hold it in.
6. Remove the Spindle Bolt and Flange.

IMPORTANT: The Spindle Bolt has a left-handed thread and removes by turning CLOCKWISE. Note: Make sure the other Flange stays in place on the Spindle.

7. Remove the Blade and install the new Blade. Make sure that the Blade's rotation arrow points in the same direction as the rotation arrow on the Upper Guard.
8. Replace the Flange and Spindle Bolt. Position the cupped side of the Flange against the blade. Hold in the Spindle Lock and wrench tighten the Spindle Bolt by turning it COUNTERCLOCKWISE. Release the Spindle Lock.
9. Rotate the Guard Pivot Plate back into place, and secure it with the Guard Pivot Bolt.
10. **WARNING!** Make sure the Lower Guard operates smoothly and properly protects from the Blade before using the saw.



Using the workpiece extension supports

1. The Table Extensions are inserted into each side of the Table, and locked in place using the Wing Screws.
2. When properly installed, the upper face of the Table Extensions are level with the Table, and provide a wider support surface for the workpiece.
3. Support the workpiece to be level with the table, and so that after the cut is made the cut off pieces will not fall. Use sawhorses or other supports (not included) to support longer workpieces.
4. If the workpiece is not level, you will make an unintentional bevel cut in the material. If the workpiece is not supported, it will bind the blade and may cause the material to kick back, potentially causing injury.

Adjusting the miter angle

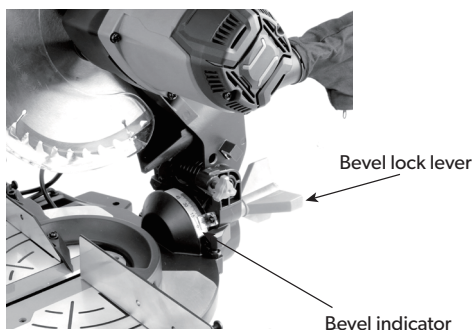
A miter cut is one that is at an angle across the horizontal surface of the material. 45° miter cuts to join two pieces in a right angle corner are common. A 30° cut is often used for a scarf joint or to make a chamfered end.

1. Loosen the Miter Knob by turning it approximately 1/4 turn counterclockwise.
2. Press down the Miter Lock to unlock the Table. While holding the Miter Lock down, move the Table to the desired angle.
3. The Miter Angle Indicator will indicate the selected angle. While the Miter Lock is released, the table will lock into place at often used miter angles.
4. Tighten the Miter Knob after adjusting the miter angle.
5. With the Table adjusted to the desired angle, place the workpiece flush against the Fence, secure it with the Clamp and make the cut.

Adjusting the bevel angle

A bevel cut is one that is at an angle vertically. Bevel cuts can be used to miter relatively wide and thin material. Bevel cuts can be used in combination with a miter cut to form a compound angle. Compound angle cuts are often used in crown moldings, picture frames and similar trim materials.

1. Loosen the Bevel Lock Lever at the rear of the saw.
2. Move the blade assembly to the desired angle. Read the angle on the Bevel Indicator.
3. Lock the blade assembly into position by rotating the Bevel Lock Lever clockwise. Tighten firmly but do not over-tighten.
4. Make a sample cut in a piece of scrap to confirm that the bevel angle is correct. If it is not, correct the angle before cutting.



Using the depth stop

If a kerfing or rabbet cut which does not cut through the workpiece is desired, use the Depth Stop Bolt to control the depth of the cut.

1. Unlock the Head Lock-down.
2. Raise the saw head assembly.
3. Pull down on the saw head to check the current setting.
4. Loosen the Depth Stop Nut on the Depth Stop Bolt.
5. Turn the Depth Stop Bolt clockwise to decrease depth and counterclockwise to increase depth.
6. Tighten the Depth Stop Nut after adjustment.

Workpiece and work area set up

1. Designate a work area that is clean and well-lit. The work area must not allow access by children or pets to prevent injury and distraction.
2. Route the power cord along a safe route to reach the work area without creating a tripping hazard or exposing the power cord to possible damage. The power cord must reach the work area with enough extra length to allow free movement while working.
3. Allow room on both left and right of saw for extended workpieces.
4. Use a saw table, saw stand or other means to support the workpiece. Mount the Miter Saw so that the surface is level to the ground, and additional supports provide a surface on the same level as the saw table. If the work surface and any workpiece supports are not level, and on the same level, unwanted bevel angles will appear in the cuts resulting in poor joinery.
5. Secure workpieces to the saw table using the Clamp or other clamping devices (not included). Securing the workpiece will provide safety by preventing kick back and by removing the need to hold workpieces near the blade by hand. Clamping the workpiece will also improve cutting accuracy by preventing the workpiece from moving during the cutting operation.

General operating instructions



DANGER! MITER SAWS CAN QUICKLY AMPUTATE FINGERS IF MISUSED. Keep hands well clear of cutting area.

1. Unlock the Head Lock-down.
 2. Make sure all adjustment knobs are tight (Miter Knob, Bevel Lock Lever, Table Extension Knobs).
 3. Blow any sawdust or debris away from the Fence. Place the work material against the Fence.
 4. Align the marked location of the cut on the work material with the saw blade.
- Note:** To prevent your workpiece from being cut too short, align the edge of the blade with your measured mark, keeping the rest of the blade on the waste side of the cut.
4. Hold the work material in place using the Clamp. Ensure that the work material is level and supported securely, use saw horses or supports if necessary.
 5. Grip the Saw Handle, press one of the Trigger Locks with your thumb, and squeeze the Trigger to start the Saw and the laser guide. Note: If the laser guide line does not line up with the cut line, release trigger and reposition workpiece before making the cut.
 6. Press down lightly to cut the material. Do not bear down on the material, use light downward pressure. If the material binds the blade, release the trigger.
 7. When the cut is completed, raise the blade assembly, release the trigger, wait for the Blade to stop turning, release the Clamp and remove the work material from the saw.
 8. To prevent accidents, turn off the tool and disconnect its power supply after use. Clean, then store the tool indoors out of children's reach.

MAINTENANCE AND SERVICING



Procedures not specifically explained in this manual must be performed only by a qualified technician.

WARNING

To prevent serious injury from accidental operation: make sure that the trigger is in the off-position and remove its battery pack before performing any procedure in this section.

To prevent serious injury from tool failure: do not use damaged equipment. If abnormal noise or vibration occurs, have the problem corrected before further use.

Cleaning, maintenance, and lubrication

1. **BEFORE EACH USE**, inspect the general condition of the tool. Check for:

- loose hardware,
- misalignment or binding of moving parts,
- cracked or broken parts,
- damaged electrical wiring, and
- any other condition that may affect its safe operation.

2. **AFTER USE**, wipe external surfaces of the tool with clean cloth.

3. **WARNING!** If the supply cord of this power tool is damaged, it must be replaced only by a qualified service technician.

If Fence needs adjustment:

1. First unplug the tool.
2. Lower the blade assembly and lock it in place using the Locking Pin.
3. Lay a carpenter's square on the table with one edge along the blade and the other along the Fence. Any inaccuracy should be visible. NOTE: The square must contact the surface of the blade, not the teeth, for an accurate reading.
4. The Fence is held in place with bolts at each end. Loosen the bolts slightly, and gently tap the Fence into position using a soft mallet. Retighten the bolts and make another test cut. Repeat the process until the Fence is adjusted accurately.
5. Once the Fence is accurately adjusted, tighten the bolts firmly in place. Recheck one last time, then proceed to work.

Cleaning, maintenance, and lubrication

If the Kerf Board becomes damaged it must be replaced.

1. Remove the four screws holding the Kerf Board in place.
2. Install a new Kerf Board. Replace the four screws and tighten them slightly.

To adjust the Kerf Board:

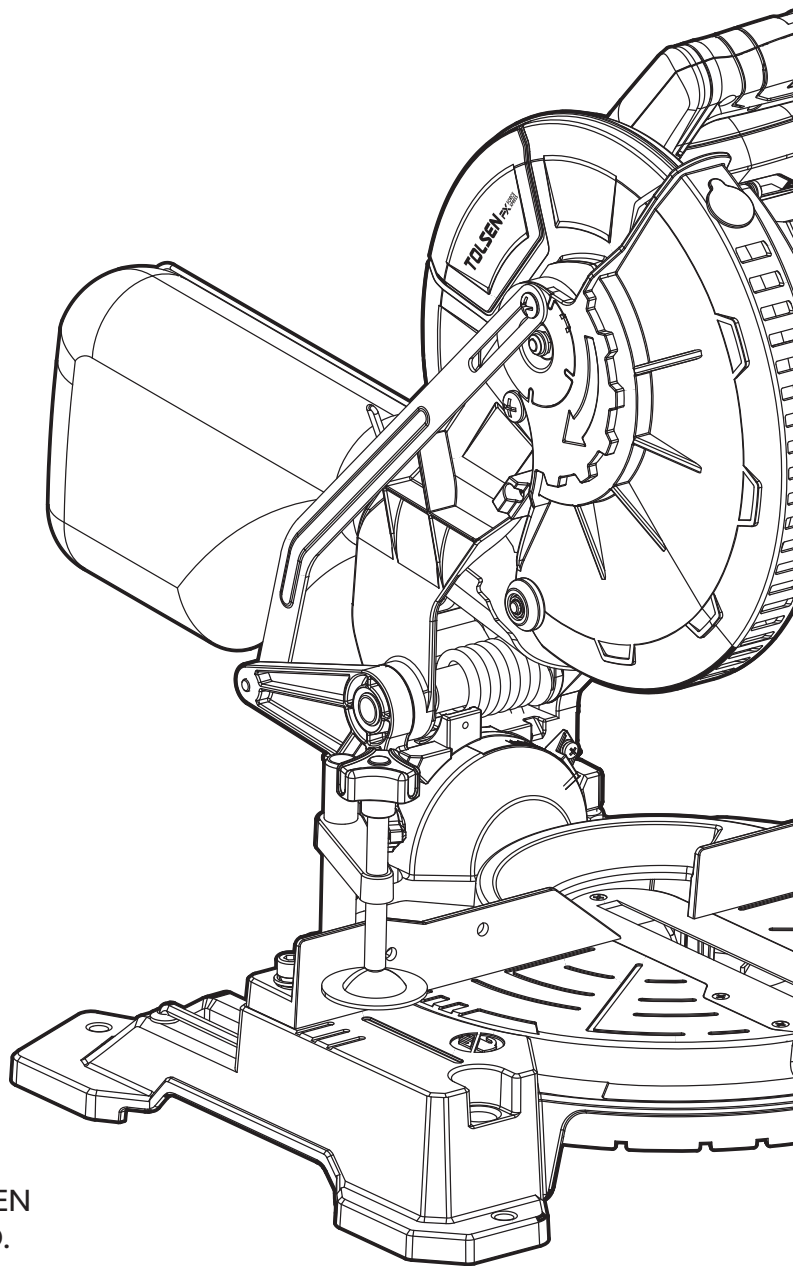
1. Lower the Saw Blade and lock it down with the Locking Pin.
2. Adjust the Kerf Board so the right side of the Blade slightly clears the edge of the Kerf Board.
3. Loosen the Bevel Lock and set the Bevel Angle at 45° left.
4. Ensure that the left side of the Blade clears the Kerf Board.
5. Tighten the four screws holding the Kerf Board in place.

TROUBLESHOOTING

problem	possible causes	Likely Solutions
Tool will not start.	<ol style="list-style-type: none"> 1. No power at outlet. 2. Cord not connected. 	<ol style="list-style-type: none"> 1. Check power at outlet. 2. Check that cord is plugged in.
Tool operates sporadically or at low power.	<ol style="list-style-type: none"> 1. Low power supply or improper extension cords. 2. Worn or cracked Carbon Brushes. 	<ol style="list-style-type: none"> 1. Check power supply and power cords. 2. Check Carbon Brushes. Replace if damaged or worn.
Wood burns at ends when cut.	<ol style="list-style-type: none"> 1. Dirty Blade. 2. Material is binding. 	<ol style="list-style-type: none"> 1. Clean Blade using blade cleaner or mineral spirits. 2. Check position of work material on Table. Material must be flat, flush against Fence and supported on ends.
Material frays or chips out.	<ol style="list-style-type: none"> 1. Finished side is down. 2. Blade chipped or dull. 3. Blade inappropriate for material. 4. Material is unsupported. 	<ol style="list-style-type: none"> 1. Keep finished side of material up or facing operator. Bottom and back side are prone to chip out. 2. Check for damaged teeth. Sharpen or replace blade. 3. Check blade manufacturer's recommendations for material being cut. For cross cutting hard wood and for precision cuts use a thin kerf blade with 60 or more teeth. 4. Use a thin piece of scrap material, such as 1/4" plywood, underneath or behind the material to support the edges of the material as it is being cut.
Blade binds, slowing or stopping saw.	<ol style="list-style-type: none"> 1. Material is misaligned on the saw or ends are not supported. 2. Material is wet, contaminated or inappropriate blade is being used. 	<ol style="list-style-type: none"> 1. Material must be flat on table, flush against the fence and supported on both ends. 2. Check condition of material and check compatibility of blade to material.
Blade does not cut completely through workpiece.	Depth Stop set too shallow.	Adjust Depth Stop Bolt for desired depth of cut.



Follow all safety precautions whenever diagnosing or servicing the tool. Disconnect power supply before service.



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