

**IMPORTANT:**  
Read Before Using

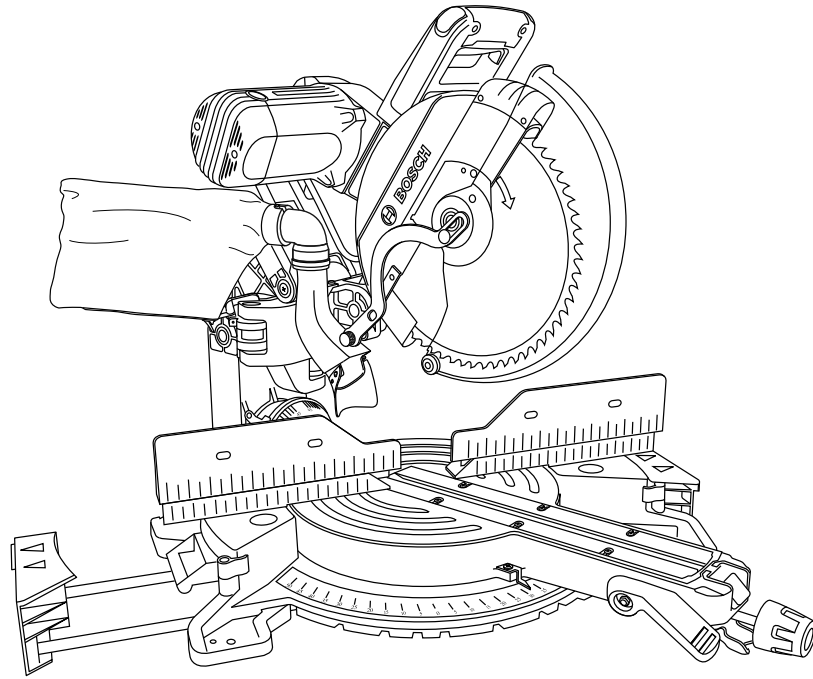
**IMPORTANTE:**  
Leer antes de usar

**IMPORTANT :**  
Lire avant usage



**Operating/Safety Instructions**  
**Instrucciones de funcionamiento y seguridad**  
**Consignes de fonctionnement/sécurité**

**GCM12SD**



**BOSCH**

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For English Version  
See page 2

Versión en español  
Ver la página 56

Version française  
Voir page 110

# Safety



**WARNING** “READ ALL INSTRUCTIONS” — Failure to follow the SAFETY RULES identified by BULLET (•) symbol listed BELOW, and other safety precautions, may result in serious personal injury.

## General Safety Rules for Benchtop Tools

### Work Area

- **Keep work area clean and well-lit.** Cluttered benches and dark areas invite accidents.
- **Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases or dust.** Power tools create sparks which may ignite the dust or fumes.
- **Keep bystanders, children and visitors away while operating a power tool.** Distractions can cause you to lose control.
- **Store idle tools out of reach of children and other untrained persons.** Tools are dangerous in the hands of untrained users.
- **Do not leave tool running unattended; turn power off.** Do not leave tool until it comes to a complete stop.
- **MAKE WORKSHOP CHILDPROOF** with pad lock, master switches or by removing starter keys.

### Electrical Safety

- **Before plugging in the tool, be certain the outlet voltage supplied is compatible with the voltage marked on the nameplate within 10%.** An outlet voltage incompatible with that specified on the nameplate can result in serious hazards and damage to the tool.
- **Double-insulated tools are equipped with a polarized plug (one blade is wider than the other). This plug will fit in a polarized outlet only one way. If the plug does not fit fully in the outlet, reverse the plug. If it still does not fit, contact a qualified electrician to install a polarized outlet. Do not change the plug in any way.** Double insulation eliminates the need for the three-wire grounded power cord and grounded power supply.
- **Avoid body contact with grounded surfaces such as pipes, radiators, ranges and refrigerators.** There is an increased risk of electric shock if your body is grounded.

- **Do not expose power tools to rain or wet conditions.** Water entering a power tool will increase the risk of electric shock.
- **Do not abuse the cord. Never use the cord to carry the tools or pull the plug from an outlet. Keep cord away from heat, oil, sharp edges or moving parts. Replace damaged cords immediately.** Damaged cords increase the risk of electric shock.
- **When operating a power tool outside, use an outdoor extension cord marked “W-A” or “W.”** These cords are rated for outdoor use and reduce the risk of electric shock.

### Personal Safety

- **Stay alert, watch what you are doing and use common sense when operating a power tool.** A moment of inattention or use of drugs, alcohol or medication while operating power tools can be dangerous.
- **Dress properly. Do not wear loose clothing or jewelry. Contain long hair. Keep your hair, clothing and gloves away from moving parts.** Loose clothes, jewelry or long hair can be caught in moving parts. Roll long sleeves above elbows. Rubber gloves and non-skid footwear are recommended when working outdoors.
- **Avoid accidental starting. Be sure switch is “OFF” before plugging in.** Carrying tools with your finger on the switch or plugging in tools that have the switch “ON” invites accidents.
- **Remove adjusting keys or wrenches before turning the tool “ON.”** A wrench or a key that is left attached to a rotating part of the tool will be thrown.
- **Do not overreach, keep proper footing and balance at all times.** Proper footing and balance enable better control of the tool in unexpected situations.
- **Do not stand on tool or its stand.** Serious injury may occur if the tool is tipped or if the cutting tool is accidentally contacted. Do not store materials on or near the tool such that it is necessary to stand on the tool or its stand to reach them.

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- **Use safety equipment. Always wear safety goggles.** Dust mask, safety shoes, hard hat or hearing protection must be used for appropriate conditions. Everyday eyeglasses only have impact-resistant lenses, they are NOT safety glasses.

## Tool Use and Care

- **Use clamps or other practical way to secure and support the workpiece to a stable platform.** Holding the workpiece by hand or against your body is unstable. It allows for workpiece to shift, causes binding of the tool and loss of control.
- **Do not force tool. Use the correct tool for your application.** The correct tool will do the job better and safer at the rate for which it is designed. Do not use the tool for purpose not intended - for example, do not use the miter saw for slicing meats.
- **Do not use tool if switch does not turn it “ON” or “OFF.”** Any tool that cannot be controlled with the switch is dangerous.
- **Disconnect the plug from the power source before making any adjustments or changing accessories.** Such preventive safety measures reduce the risk of starting the tool accidentally.
- **Keep cutting tools sharp and clean.** Properly maintained tools, with sharp cutting edges, are less likely to bind and easier to control. When mounting saw blades, be certain that the arrow on the blade matches the direction of the arrow marked on the tool and that the teeth are also pointing in the same direction.
- **Inspect guards before using a tool. Keep guards in place. Check moving parts for binding or any other condition that may affect the normal operation or safety features of the tool. If damaged, have tool serviced before using the tool.** Many accidents are caused by poorly maintained tools.
- **Do not alter or misuse tool.** Any alteration or modification is a misuse and may result in serious personal injury.
- **The use of any other accessories not specified in this manual may create a hazard.** Accessories that may be suitable for one type of tool may become hazardous when used on an inappropriate tool.

## Service

- **Tool service must be performed only by qualified repair personnel.** Service or maintenance performed by unqualified personnel may result in misplacing internal wires and components which could cause serious hazard.
- **When servicing a tool, use only identical replacement parts. Follow instructions in the Maintenance and Lubrication section of this manual.** Use of unauthorized parts or failure to follow maintenance instructions may create a hazard.

## Safety Rules for Miter Saws

- **To reduce risk of injury, use saw blade rated 3800/min (RPM) or greater.**
- **Use clamps to support workpiece whenever possible. If supporting the workpiece by hand, you must always keep hand outside of “No Hand” area as marked with a symbol on the base. Do not use this saw to cut pieces that are too small to be securely clamped.** Your hand, if placed inside the “No Hands” region, can easily slip or be pulled into the blade.
- **Do not reach in back of the saw blade behind the fence with either hand to hold down or support the workpiece, remove wood scraps or for any other reason.** The proximity of the spinning saw blade to your hand may not be obvious and you may be seriously injured.
- **Never cross your hand over intended line of cutting.** Supporting the workpiece “cross handed,” i.e., holding the left side of the workpiece with your right hand, is very dangerous.
- **Always disconnect the power cord from the power source before making any adjustments or attaching any accessories.** You may unintentionally start the saw, leading to serious personal injury.
- **Miter saws are intended to cut wood or wood-like products; they cannot be used with abrasive cutoff wheels for cutting ferrous material such as bars, rods, studs, etc. However, if cutting materials like aluminum or other non-ferrous metals, use only saw blades specifically recommended for non-ferrous metal cutting.** Cutting ferrous materials causes excessive sparking and will damage the lower guard and overload the motor.

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- **Inspect your workpiece before cutting. If workpiece is bowed or warped, clamp it with the outside bowed face toward the fence. Always make certain that there is no gap between the workpiece, fence and table along the line of the cut.** Bent or warped workpieces can twist or rock and may cause binding on the spinning saw blade while cutting. Also, make sure there are no nails or foreign objects in the workpiece.
- **Do not use the saw until the table is clear of all tools, wood scraps, etc., except the workpiece.** Small debris, loose pieces of wood or other objects that contact the revolving blade can be thrown with high speed at the operator.
- **Do not feed workpiece into the blade or cut “freehand” in any way. Workpiece must be stationary and clamped or braced by your hand.** Saw must be fed through the workpiece smoothly and at a rate which will not overload the saw’s motor.
- **Cut only one workpiece at a time.** Multiple workpieces cannot be adequately clamped or braced and may bind on the blade or shift during cutting.
- **Be certain the miter saw is mounted or placed on a level, firm work surface before using.** A level and firm work surface reduces the risk of the miter saw becoming unstable.
- **Plan your work. Provide adequate support accessories such as tables, saw horses, table extension, etc. for workpieces wider or longer than the table top (see page 29).** Workpieces longer or wider than the miter saw table can tip if not securely supported. If the cutoff piece or workpiece tips, it can lift the lower guard or be thrown by the spinning blade.
- **Do not use another person as a substitute for a table extension or as additional support.** Unstable support for the workpiece can cause the blade to bind or the workpiece to shift during the cutting operation, pulling you and the helper into the spinning blade.
- **The cutoff piece must not be jammed or pressured by any other means against the spinning saw blade.** If confined, i.e., using length stops, it could get wedged against the blade and thrown violently.
- **Always use a clamp or a fixture designed to properly support round material such as dowel rods or tubing.** Rods have a tendency to roll while being cut, causing the blade to “bite” and pull the work with your hand into the blade.
- **When cutting irregularly shaped workpieces, plan your work so it will not slip and pinch the blade and be torn from your hand.** A piece of molding, for example, must lie flat or be held by a fixture or jig that will not let it twist, rock or slip while being cut.
- **Let the blade reach full speed before contacting the workpiece.** This will help avoid thrown workpieces.
- **If the workpiece or blade becomes jammed or bogged down, turn miter saw “OFF” by releasing switch. Wait for all moving parts to stop and unplug the miter saw, then work to free the jammed material.** Continued sawing with jammed workpiece could cause loss of control or damage to miter saw.
- **Braking action of the saw causes the saw head to jerk downward. Be ready for this reaction** when making an incomplete cut or when releasing the switch before the head is completely in the DOWN position.
- **After finishing the cut, release the switch, hold the saw arm down and wait for blade to stop before removing work or cutoff piece. If blade does not stop within five (5) seconds, unplug the saw and follow the instructions in the Troubleshooting section. REACHING WITH YOUR HAND UNDER A COASTING BLADE IS DANGEROUS!**
- **There are additional safety instructions for particular operations of the saw in the Saw Operations section. Read the rest of the manual for safe operation.**
- **The GCM12SD miter saw has an extremely smooth action and requires the operator to firmly grip the handle before turning “ON” the saw. For slide-action cutting, first grip the switch handle in the UP position and pull out back to the fully extended position. The blade must clear the workpiece. Make certain the clamp does not interfere with the guard and head assembly. Second, turn saw “ON” and lower the saw to the table. Then PUSH saw through the workpiece. Release the switch and wait for the blade to completely stop before raising the head assembly and removing the workpiece. Never “pullcut,” since blade may climb the workpiece, causing KICKBACK.**
- **For chop-action cutting, move the head assembly to the rear as far as it will go and engage the mechanism lock. Then turn the saw “ON” and lower the head assembly to make the cut. Release the switch and wait for the blade to completely stop before raising the head assembly and removing the workpiece.** Failure to lock the mechanism can cause the blade to suddenly climb up on the top of the workpiece and force itself toward you.

“SAVE THESE INSTRUCTIONS”

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- Do not allow familiarity gained from frequent use of your miter saw to become commonplace. Always remember that a careless fraction of a second is sufficient to inflict severe injury.
- THINK SAFETY! SAFETY IS A COMBINATION OF OPERATOR'S COMMON SENSE, KNOWLEDGE OF THE SAFETY AND OPERATING INSTRUCTIONS AND ALERTNESS AT ALL TIMES WHEN THE MITER SAW IS BEING USED.

**⚠ WARNING** THE WARNINGS SHOWN BELOW CAN BE FOUND ON YOUR TOOL. THESE WARNINGS ARE ONLY A CONDENSED FORM OF THE MORE DETAILED SAFETY RULES AND PRECAUTIONS THAT APPEAR IN YOUR OWNER'S MANUAL. THEY SERVE AS A REMINDER OF ALL SAFETY RULES NEEDED FOR SAFE OPERATION OF THIS MITER SAW.

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

- Lead from lead-based paints,
- Crystalline silica from bricks and cement and other masonry products, and
- 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.

**⚠ WARNING** Do not use the Bosch GCM12SD miter saw to cut fiber cement board. The Bosch miter saw is not intended to cut fiber cement board.



**⚠ WARNING** To reduce risk of injury, user must read and understand the instruction manual. ▲ Wear eye and respiratory protection. ▲ Use saw blade rated 3800/min or greater. ▲ Do not use saw without functioning guard system. If guard doesn't operate smoothly, have it serviced. After changing blade return guard to operating position. ▲ Keep hands a safe distance from saw blade. Always keep outside of No-Hands zone. ▲ Keep hands away from pinch points. ▲ Disconnect saw from power source before servicing or changing blade. ▲ Never reach around or in the back of the saw blade. ▲ Hold or clamp workpiece against base and fence. Never perform any operation freehand. ▲ Do not Cross-Hand cut. Never place your hands or arms across the projected saw blade path. With motor OFF, make a Dry-Run to be aware of the blade's reach. ▲ For bevel or compound cutting, adjust sliding fence clear of blade path and guard system. ▲ After turning saw OFF, keep saw in the down position and wait for blade to stop before removing cutoff pieces or changing settings. ▲ To avoid electrical shock, do not expose to rain or use in damp locations. ▲ When servicing use only identical replacement parts.

▲ FOR SLIDE ACTION CUTTING, ALWAYS FOLLOW THESE INSTRUCTIONS:



1. PULL saw carriage away from the fence, until blade clears the workpiece or to its maximum extension if blade can not clear the workpiece.

2. Turn saw "ON" and lower the saw to the table.

3. PUSH saw thru the workpiece. Never "pull-cut" since blade may climb the workpiece causing KICKBACK.

**BOSCH GCM12SD**  
 Ø12" (305mm) DUAL-BEVEL  
 HINGE SLIDE MITER SAW  
 120V~ 50/60Hz 15A n<sub>g</sub> 3800/min (RPM) 3 601 F65 010  
 Robert Bosch Tool Corp., Mount Prospect, IL  
 Made in China

SN

DOUBLE INSULATED E152254  
 LISTED TOOL 293G  
 Patents Pending



DESIGNATED DANGER ZONES - AVOID POSITIONING HANDS, FINGERS OR ARMS IN THE AREA DESIGNATED BY THIS SYMBOL.



DESIGNATED PINCH POINT AREA - A DANGER ZONE - AVOID PLACING HANDS, FINGERS OR ARMS IN THESE AREAS. NEVER ATTEMPT TO MOVE OR LIFT THE SAW IN THESE AREAS.



DESIGNATED NO-CARRY AREA - A DANGER ZONE - NEVER LIFT OR CARRY SAW BY THE MAIN SWITCH HANDLE.

Do Not Carry the Saw by this handle.  
 No lleve la sierra por este mango.  
 Ne transportez pas la scie par sa poignée.


"SAVE THESE INSTRUCTIONS"



# Safety

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## Double-Insulated Tools

Double insulation  is a design concept used in electric power tools which eliminates the need for the three-wire grounded power cord and grounded power supply system. It is a recognized and approved system by Underwriter’s Laboratories, CSA and Federal OSHA authorities.

- Servicing of a tool with double insulation requires care and knowledge of the system and should be performed only by a qualified service technician.
- WHEN SERVICING, USE ONLY IDENTICAL REPLACEMENT PARTS.
- POLARIZED PLUGS. Your tool is equipped with a polarized plug (one blade is wider than the other); this plug will fit in a polarized outlet only one way. If the plug does not fit fully in the outlet, reverse the plug. If it still does not fit, contact a qualified electrician to install the proper outlet. To reduce the risk of electrical shock, do not change the plug in any way.

## Extension Cords

- Replace damaged cords immediately. Use of damaged cords can shock, burn or electrocute.
- If an extension cord is necessary, a cord with adequate size conductors should be used to prevent excessive voltage drop, loss of power or overheating. The table shows the correct size to use, depending on cord length and nameplate amperage rating of tool. If in doubt, use the next heavier gauge. Always use UL and CSA listed extension cords.

### RECOMMENDED SIZES OF EXTENSION CORDS

Tool Ampere Rating	120-volt AC Tools Cord Length in Feet Cord Size in AWG			
	25	50	100	150
3-6	18	16	16	14
6-8	18	16	14	12
8-10	18	16	14	12
10-12	16	16	14	12
12-16	14	12	N/A	N/A

NOTE: The smaller the gauge number, the heavier the cord.

“SAVE THESE INSTRUCTIONS”

# Table of Contents

<b>Safety</b> . . . . .	2-6	<b>Preparing for Saw Operations</b> . . . . .	28-31
General Safety Rules for Benchtop Tools . . . . .	2-3	Body and Hand Positions . . . . .	28
Safety Rules for Miter Saws . . . . .	3-6	Workpiece Support . . . . .	29-30
<b>Table of Contents</b> . . . . .	7	<b>Saw Operations</b> . . . . .	32-50
<b>Electrical Requirements</b> . . . . .	7	Switch Activation . . . . .	32
Electric Brake . . . . .	7	Using Miter Detent System . . . . .	33
<b>Getting to Know Your Miter Saw</b> . . . . .	8-9	Miter Detent Override . . . . .	33
<b>Assembly</b> . . . . .	10-16	Chop Cuts . . . . .	34
Unpacking and Checking Contents . . . . .	10	Slide Cuts . . . . .	35
Tools Needed for Assembly and Alignment . . . . .	11	Miter Cuts . . . . .	36-38
Attaching Loose Parts . . . . .	12	Bevel Cuts . . . . .	39-42
Removing and Installing Blades . . . . .	13-14	Compound Cuts . . . . .	43
Assembling Dust Collection System . . . . .	15-16	Cutting Grooves . . . . .	44
<b>Adjustments</b> . . . . .	17-25	Cutting Base Molding . . . . .	45
Using the Head Assembly Lock Pin . . . . .	17	Cutting Crown Molding . . . . .	45
Using the Glide Movement Controller . . . . .	17	Crown Molding Angled to Table and Fence . . . . .	46
Using the Mechanism Lock Lever . . . . .	18	Crown Molding Lying Flat on Table . . . . .	47
Depth of Cut Adjustment . . . . .	19	Crown Molding Auxiliary Fence . . . . .	48-49
Miter Detent System – Adjustment Procedure . . . . .	20	Special Cuts . . . . .	50
0° Bevel Stop – Adjustment Procedure . . . . .	21-22	<b>Maintenance and Lubrication</b> . . . . .	51-52
45° Bevel Stop – Adjustment Procedure . . . . .	23-24	<b>Troubleshooting</b> . . . . .	53-55
Adjusting Bevel Lock Tension . . . . .	25	Troubleshooting Guide – Electrical . . . . .	53
Adjusting Front Stabilizing Bolt . . . . .	25	Troubleshooting Guide – General . . . . .	54-55
<b>Transporting and Mounting</b> . . . . .	26-27	<b>Accessories</b> . . . . .	55
Mounting Applications . . . . .	27		

## Electrical Requirements

- Connect this saw to a 120V, 15-amp branch circuit with a 15-amp time delay fuse or circuit breaker. Using the wrong size fuse can damage the motor.
- Fuses may “blow” or circuit breakers may trip frequently if motor is overloaded. Overloading can occur if you feed the blade into the workpiece too rapidly or start and stop too often in a short time.
- Most motor troubles may be traced to loose or incorrect connections, overload or low voltage (such as small size wire in the supply circuit or overly long supply circuit wire). Always check the connections, the load and the supply circuit whenever motor does not work well.

### Electric Brake

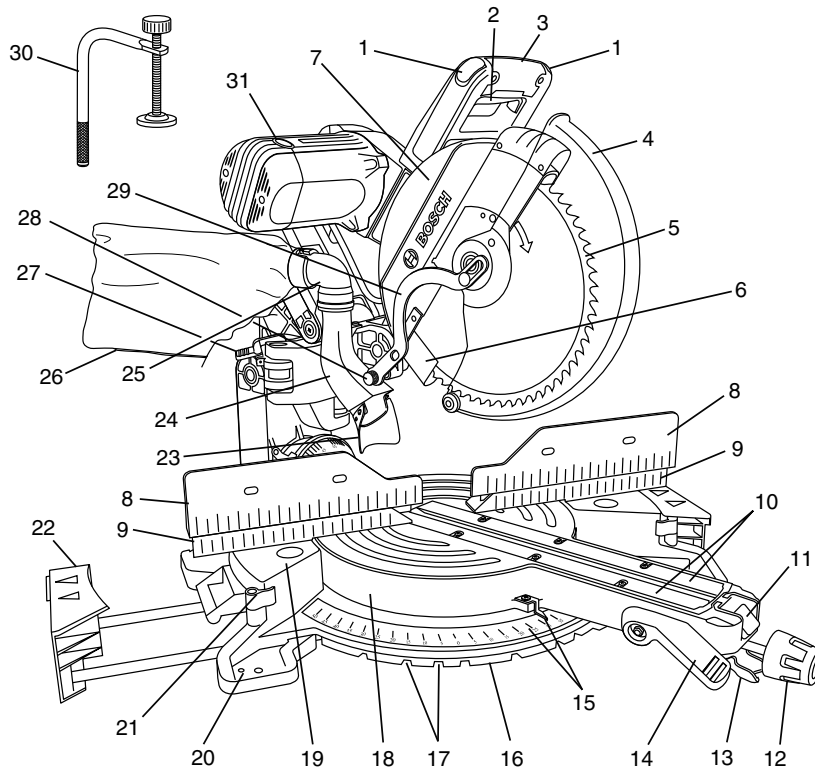
Your saw is equipped with an automatic electric brake which is designed to stop the blade from spinning in about five (5) seconds after you release the trigger switch. It is useful when making certain cuts in wood where a coasting blade would result in a wide, imprecise cut.

**⚠ WARNING** When electrical power is lost due to blown fuse or other causes, the motor will gradually slow down and the braking action is initiated **ONLY** by the release of the trigger switch.

The electric blade brake of your miter saw has been designed for highest degree of reliability, but unexpected circumstances such as contamination on the commutator and brushes or failure of motor’s components can cause the brake not to activate. If this condition occurs, turn the saw “ON” and “OFF” four to five times without contacting the workpiece. If the tool operates but the brake does not consistently stop the blade in about five seconds, **DO NOT** use saw and have it serviced immediately.

**⚠ WARNING** The brake action of this saw is not intended as a safety feature. Remember to let the saw blade come to a complete stop before raising the blade from the workpiece. As always, the guard system is your best protection against unintentional contact with a spinning saw blade. **NEVER** wedge open or defeat the closing action of the lower guard.

# Getting To Know Your Miter Saw



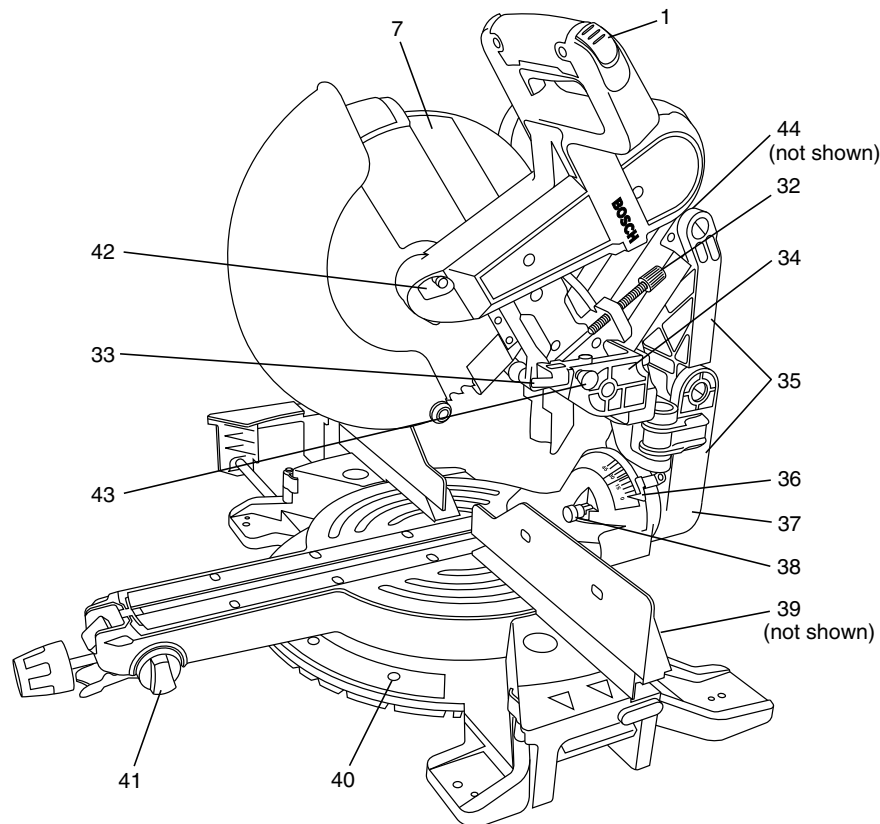
**⚠ WARNING** To avoid injury from accidental starting, remove plug from power source outlet before making any adjustments.

1. **Switch Lock-Off Release Buttons** – One of these two buttons must be pressed before the power switch can be pressed.
2. **Power Switch** – The power switch used with the “Lock-Off” button energizes the unit.
3. **Main Handle** – This handle contains the power switch. Pulling this handle down lowers the blade into the workpiece.
4. **Lower Blade Guard/Lower Guard Lip** – The lower blade guard helps protect your hands from the spinning blade. It retracts as the blade is lowered. Lip can be used to raise the lower guard in the event that the guard becomes jammed on a workpiece.
5. **Blade** – Use only 12" (308 mm) diameter blades with 1" (25.4 mm) diameter arbor holes.
6. **Chip Deflector** – Deflects cut-off workpieces from entering the upper guard.
7. **Upper Guard** – Covers upper portion of the blade.
8. **Sliding Fence** – Supports the workpiece. The fence has a cast-in scale to make repetitive cuts easy. The fence also has holes to secure an auxiliary fence if desired.
9. **Stationary Fence** – Stationary fence is bolted to the base and will support the workpiece when the sliding fence is removed.

10. **Kerf Inserts** – Kerf inserts can be adjusted to different blade widths to minimize workpiece tear-out.
11. **Miter Detent Override** – Allows detent action to be locked out, allowing for micro-adjustments to any miter angle.
12. **Miter Lock Knob** – The miter lock knob locks the miter saw table at any desired miter angle.
13. **Miter Detent Lever** – The lever releases the table from the detent.
14. **Bevel Lock Lever** – The front-positioned bevel lock lever locks the head assembly at the desired bevel angle.
15. **Miter Scale/Miter Pointer** – The pointer rotates with the table and blade. It points to the miter scale to indicate the angle setting before a cut is made.
16. **Miter Detent Plate** – The position of the plate can be adjusted to set the accuracy of its detent locations.
17. **Miter Detents** – There are ten (10) miter detent slots for fast and accurate miter cuts of common miter angles.
18. **Table** – Sits in base, provides workpiece support, rotates for desired miter cuts and rotates the head assembly. The front extended part of the table is called the miter arm.
19. **Base** – Provides working surface to support workpiece.
20. **Tool Mounting Pads** – The four corners of the saw provide areas to clamp, bolt or nail the saw to a flat work surface.



# Getting To Know Your Miter Saw



**NOTE:** To view items 21 through 31, see page 8.

- 21. Base Extension Clamping Levers** – Lock the base extensions at the desired positions.
- 22. Sliding Base Extensions** – Provide extra work support. Useful when cutting long workpieces.
- 23. Rubber Deflector** – Attaches to bottom of chute. Deflects dust into the chute.
- 24. Dust Chute** – Directs sawdust up and through the elbow and to the bag.
- 25. Elbow** – Connects the dust chute to the dust bag. Can be rotated to direct dust.
- 26. Dust Bag** – Has a zipper at the bottom. Bag can be uncoupled from elbow for emptying.
- 27. Mechanism Lock Lever** – Holds saw in full back position for chop cuts or fully extended for transporting.
- 28. Link Knob** – Attaches guard link to the pivot post.
- 29. Lower Guard Link** – Allows for smooth movement of the lower guard.
- 30. Clamp** – Use to hold the workpiece to the table and base – insert into clamp post location (item 39).
- 31. Brush Cap** – Keeps motor brushes in position. Provides access for inspecting and replacing brushes.
- 32. Depth Stop Screw** – Turn the knob end to adjust the blade depth for cutting grooves.
- 33. Depth Stop Plate** – Plate can be swung out to limit the depth of the blade travel.
- 34. Pivot Post** – Provides support for the saw head, dust collection system and other functional parts.
- 35. Axial Glide Mechanism** – Allows saw to smoothly slide in and out. Can be locked in full rear or fully extended positions.
- 36. Bevel Scale and Pointers** – Scale is large and angled - allows user to easily read bevel angles. Pointer indicates what the current angle is.
- 37. Bevel Post** – Provides rotating support for all miter saw parts above the table.
- 38. Bevel Detent Pin (Crown Molding Setting)** – When engaged, it locks the head assembly to the bevel angle of 33.9° to the left or right.
- 39. Clamp Post Locations** – Two vertical post holes in the base – provided to insert the clamp (item 30).
- 40. Miter Detent Plate Screws** – Four screws accessible through holes in the miter scale. These screws are loosened when adjusting position of the detent plate.
- 41. Bevel Range Selector Knob** – Allows selection of 3 bevel ranges: “0-45° Left”, “0-45° Right” or “Max. Bevel Angle to 47°.”
- 42. Arbor Lock** – Press arbor lock button to keep blade from rotating when loosening or tightening arbor bolt during blade removal or installation.
- 43. Head Assembly Lock Pin** – Used to lock the head assembly in the lower position for transporting.
- 44. Glide Movement Controller** – Adjusts to regulate movement of the glide mechanism.

# Assembly

## Unpacking and Checking Contents

**Unpacking the Miter Saw** – When removing this tool from packaging materials, reach down to the two side carry-handle locations and slowly lift until it clears the package.

**⚠ WARNING** To avoid severe pinching, never lift or move this saw by gripping any component of the mechanism support system.



This symbol is placed at various locations on the tool to warn the user of pinch-point areas.

**Checking Contents in Package** – Open the top of the package and look for the included loose parts. Refer to the diagram below.

Some small parts such as the bevel lock lever and miter lock knob require attachment to the tool before it is ready for use – See “Attaching Loose Parts” on page 12.

**⚠ WARNING** To avoid possible injury, always disconnect plug from power source before performing any assembly, adjustments or repairs.

### Loose Parts - 1 of each shown

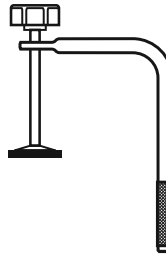


Check off for each part

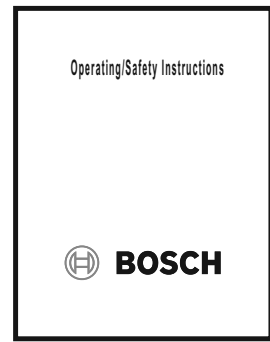
10mm Flat Washer



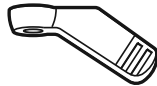
Workpiece Clamp



Manual



Bevel Lock Lever



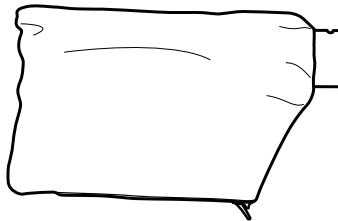
6mm Flat Washer



6mm Lock Nut



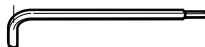
Dust Bag



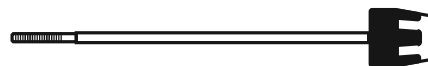
10 mm Socket Tool



6/4mm Hex Key

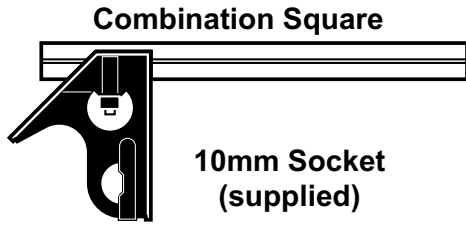


Miter Lock Knob



# Assembly

## Tools Needed for Assembly and Alignment



10mm Socket  
(supplied)



#2 Phillips Screwdriver



6/4mm Hex Key  
(supplied)

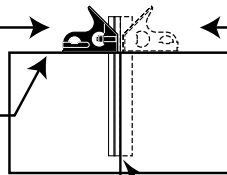


**NOTE:** A 6mm and a 4mm hex key can be substituted for the supplied 6/4mm hex key.

### Combination Square Must Be True - Checking Combination Square

1. Position square and draw a light line

3/4" board with straight top edge



drawn line

2. Flip square (shown in dotted position)

3. Check edge of flipped square against the drawn line. There should be no gap or overlap at the bottom end.

no gap or overlap

# Assembly

## Attaching Loose Parts

**⚠ WARNING** To avoid possible injury, disconnect plug from power source before performing any assembly, adjustments or repairs.

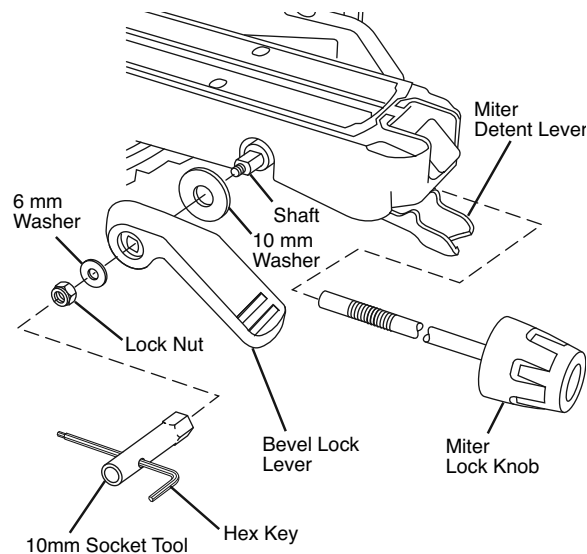


Figure 1

**Attaching the Bevel Lock Lever** – This miter saw is packaged with the saw head locked at 0° bevel angle. The bevel lock lever must be attached before operating the tool.

1. Slide the 10 mm flat washer over the shaft (area with flats).
2. Slide the bevel lock lever over the shaft, aligning the flats with the shaft to the flats on the lever's mounting hole. The lever should be horizontal with the handle to the front (see Figure 1).
3. Slide the 6 mm flat washer over the shaft (area with screw threads) and against the recessed wall of the lever.
4. Finger-tighten the 10mm lock nut on the shaft. Use the 10mm socket tool to tighten the lock nut. NOTE: The 6/4mm hex key is placed through the holes in the socket tool to assist in tightening.
5. Lift the bevel lock lever and push back down to check that the lever is securely in place.

**Attaching the Miter Lock Knob** – Locate the miter lock knob from among the loose parts.

1. Look under the turntable's front arm above the lock lever and locate the 10mm hole (see Figure 1).
2. Insert the long shaft of the miter lock knob through this hole until it stops.
3. Turn the knob clockwise (about 10 full revolutions) until it is tight or "locked."

4. Loosen the knob 1/2 turn to unlock it. The table is now free to be moved on the base.

**Using the Miter Lock Knob** –

1. Loosen the miter lock knob.
2. While holding the knob in your palm, reach down with your index or middle finger and pull up the detent lever. While gripping knob, rotate table left or right to needed miter angle and release the lever.
3. Tighten the knob once you are at the correct angle.

NOTE: It is recommended to tighten the miter lock knob before all cuts. It is required to tighten the knob before cutting at any angle between detent engagements or when the miter detent override system is in use.

**Storing the 6/4mm Hex Key** – There is a storage location on the saw to store the 6/4mm hex key. Insert the short leg of the hex key through the rubber grommet as shown. Place the long leg into the tool rest and press down into the retainer clip (see Figure 2).

NOTE: The 6/4mm hex key is needed to change the blade and to make tool adjustments. If lost, two separate hex keys may be substituted: a 4mm hex key and a 6mm hex key.

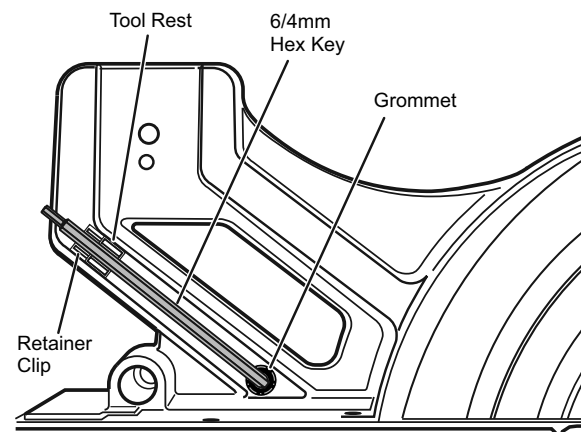


Figure 2. Hex Key Storage

# Assembly

## Removing and Installing Blades

**⚠ WARNING** To avoid possible injury, disconnect plug from power source before performing any assembly, adjustments or repairs.

### Moving Guard Assembly

1. Position the saw in the UP position and at 0° bevel. If in the DOWN position, press down slightly on the saw head assembly and pull out the head assembly lock pin (item 43, page 9); then allow the saw head to come up (see Figure 3).
2. Unscrew the link knob (item 28, page 9) by hand from the pivot post and allow the link assembly to hang. The link knob will stay on the link.
3. Loosen front cover plate screw two turns using the 6/4mm hex key. Do not remove screw. A 4mm hex key may be used as an alternate.
4. Loosen rear plate screw six full turns using the 6/4mm hex key. Do not remove screw.
5. Slide the cover plate down and out from the rear screw. Rotate the cover plate and lower guard counterclockwise around the front screw. While holding the lower guard up against the upper guard, move the link so its round hole can go over the rear screw – let go and the lower guard assembly will be held out of the way (see Figure 4).

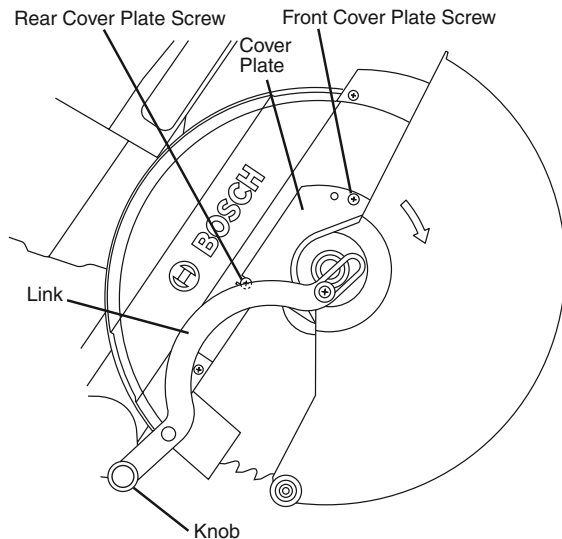


Figure 3

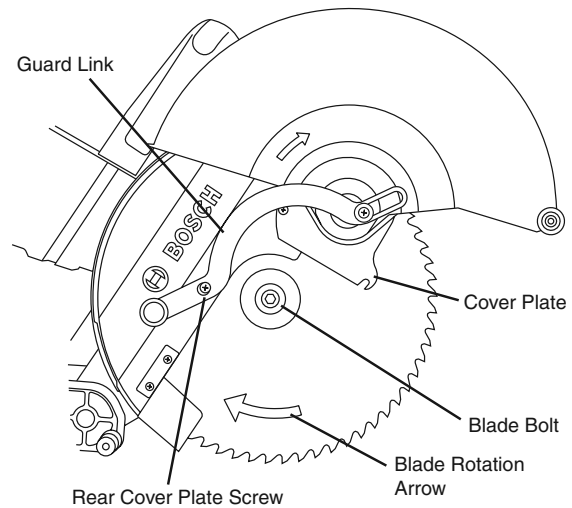


Figure 4

### Removing Blade

1. Press and hold the arbor lock (red button on opposite side of upper guard – item 42, page 9). Rotate the blade slowly while pressing the arbor lock until it fully seats into its lock position.
2. Using the 6/4mm hex key, loosen the blade bolt by firmly turning it **clockwise**. NOTE: This bolt has left-hand threads.
3. Remove the blade bolt and outer washer. Carefully grab the blade. Slide the blade away from the inner washer and off the arbor shaft, then down and away from the saw. Leave the inner washer on the arbor shaft (see Figure 5).



# Assembly

## Removing and Installing Blades

**⚠ WARNING** To avoid possible injury, disconnect plug from power source before performing any assembly, adjustments or repairs.

### Installing 12" Blade

**⚠ WARNING** To avoid injury, do not use a blade larger or smaller than 12" diameter and 1" arbor. The blade's maximum plate thickness is 0.100".

**⚠ WARNING** To reduce risk of injury, use saw blade rated 3800/min (RPM) or greater.

1. Follow all "Moving Guard Assembly" and "Removing Blade" steps.
2. Carefully handle the new blade. Check that the rotation arrow on the blade matches the rotation arrow on the lower guard. Slide the blade up and between the sides of the chip deflector and over the arbor shaft. Move the blade so its arbor hole goes around the support ring of the inner washer (see Figures 4 and 5).
3. Place the outer washer over the arbor shaft and finger-tighten the blade bolt (counterclockwise). Check that the blade remained on the inner washer's support ring.
4. Rotate the blade slowly while pressing the arbor lock until it fully seats into its lock position.
5. Using the 6/4mm hex key, firmly tighten the blade bolt **counterclockwise**. NOTE: This bolt has left-hand threads. Do not over tighten. A 6mm hex key may be used as an alternate.
6. Remove the lower guard link from the rear cover plate screw. Rotate the lower guard and cover plate around the front cover plate screw until the cover plate's slot slides under the rear cover plate screw head. Fully tighten both cover plate screws using the 6/4mm hex key.
7. Place the lower guard link back to the original position, then firmly finger-tighten the link knob to the pivot post. It may be necessary to retract the lower guard while tightening the link knob.
8. Be sure the arbor lock is released so the blade turns freely.
9. Place the 6/4mm hex key back in storage area.

**⚠ WARNING** Tighten the cover plate screws. Loose cover plate screws may interfere with and hang up lower blade guard. Never use saw without cover plate securely in place. Lower guard will not function properly.

**⚠ WARNING** After installing a new blade, make sure the blade does not interfere with the table insert at 0° and 45° bevel positions. Lower the blade into the blade slot and check for any contact with the base or turntable structure. If the blade contacts base or table, seek authorized service.

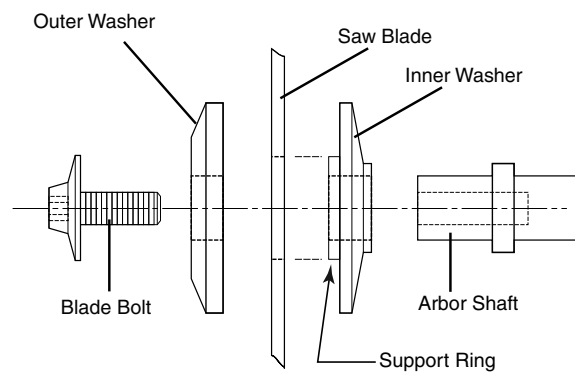


Figure 5. Blade Hardware

# Assembly

## Assembling Dust Collection System

**⚠ WARNING** To avoid possible injury, disconnect plug from power source before performing any assembly, adjustments or repairs.

The dust collection system used on this tool is unique because it is not attached to the upper guard. This placement provides superior dust collection for the majority of cuts. When adjusting or removing any dust collection components, be sure the saw is unplugged.

### Elbow

The elbow is attached to the top of the dust chute. NOTE: It is recommended that the elbow is always in place before operating the tool – it is required to direct dust and debris away from the operator. The elbow can be rotated in place. The elbow supports the dust bag or can be connected to a vacuum cleaner.

**Removing Elbow** – For cleaning, the elbow may be removed by pulling up and twisting until it is free of the dust chute. Reattach the elbow by pressing and twisting until it snaps over the chute's molded-in retaining ring. Always reattach before using the saw.

### Attaching and Adjusting the Dust Bag

**Attaching (and Removing) Dust Bag** – The elbow has pins on the top and bottom of the exit port which will engage the coupler end of the dust bag assembly. To attach the dust bag, align the coupler's slots with the elbow's pins, then push and twist it clockwise. To remove the dust bag, twist the coupler counterclockwise, then pull off – always leave the elbow on the dust chute (see Figure 6).

**Adjusting Dust Bag** – After attaching the bag, it is recommended to do a "dry cut" before cutting with the saw – this means: unplug the tool, preset it for intended cut and practice the cut. For some bevel cuts, the sliding fence may have to be moved or removed to avoid being cut or making contact with the dust bag. The bag's position may also need a rotating adjustment if it contacts the workpiece during a slide cut.

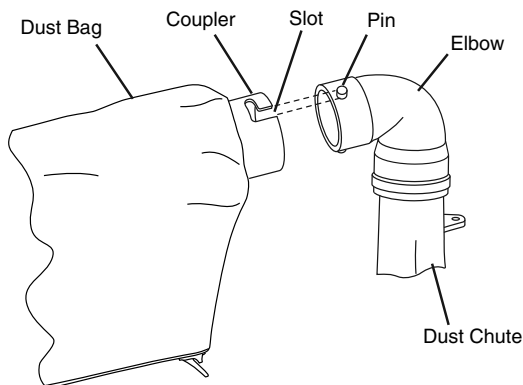


Figure 6

### Using and Cleaning the Dust Bag

**Using Dust Bag** – Attach the clean bag to the elbow. Adjust the elbow and dust bag, if necessary, so they do not interfere with the tool during the intended cutting operation.

**Cleaning Dust Bag** – After the dust bag is 2/3 to 3/4 full, remove it from the saw. Bring the bag to a proper container and pull open the zipper located on the bottom of the bag. Hold the bag by the coupler end and shake it vigorously until all the dust and debris fall from it. Close zipper and reattach the bag. NOTE: Clean the bag at the end of the cutting session and before transporting or storing the saw (see Figure 7).

**⚠ WARNING** Be extremely careful when disposing of dust. Materials in fine particle form may be explosive. Do not throw sawdust on an open fire. Spontaneous combustion, in time, may result from the mixture of oil or water with dust particles.

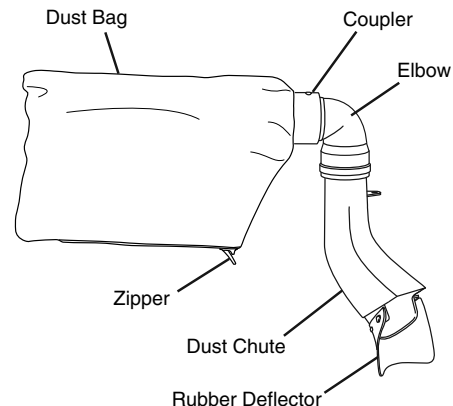


Figure 7

# Assembly

## Assembling Dust Collection System

**⚠ WARNING** To avoid possible injury, disconnect plug from power source before performing any assembly, adjustments or repairs.

### Attaching a Vacuum Cleaner

The elbow has an exit port which will accept a standard 35mm diameter vacuum fitting or a 1-1/4" tube diameter. The 35mm diameter fitting is the standard size used on the Bosch Airsweep™ Vacuum Cleaners, Models 3931 and 3931A. For larger vacuum tube sizes, use an adaptor.

**Attaching to Vacuum** – Insert the vacuum fitting or tube into the elbow's exit port as far as it will go. Check to see that the vacuum hose is free from the mechanism and cutting path before plugging saw into power source.

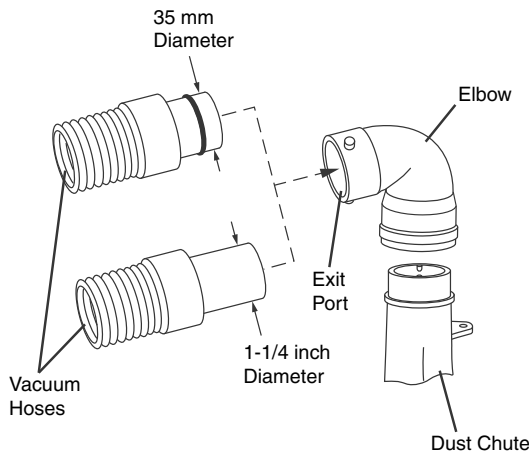


Figure 8. Attaching Vacuum Cleaner

### Repositioning or Removing the Rubber Deflector

The rubber deflector extends the range of dust and debris collection and should be left on the tool for maximum dust pickup efficiency. When slide cutting extra-tall materials (more than 2-13/16" high), the rubber deflector will contact and flex over these materials. It will also contact and flex when the saw is pulled back before the cut. It will return to its original shape after the cut.

**Repositioning Deflector** – If the operator wants to avoid the contact of the rubber deflector with the material, the deflector can be temporarily folded up and over the back of the dust chute. If the operator permanently wants no contact of the deflector with the material being cut, the deflector may be removed.

**Removing Deflector** – Pull one of the deflector's tabs to the front and then sideways until it comes off one of the dust chute's side hooks (see Figure 9). Unhook the opposite side. Then unhook the deflector from the rear post of the chute by pulling and stretching until it is free. NOTE: Removing the deflector lowers dust collection capability.

**Attaching Deflector** – Start by stretching and hooking the deflector over the rear post, followed by hooking over each side hook (see Figure 10).

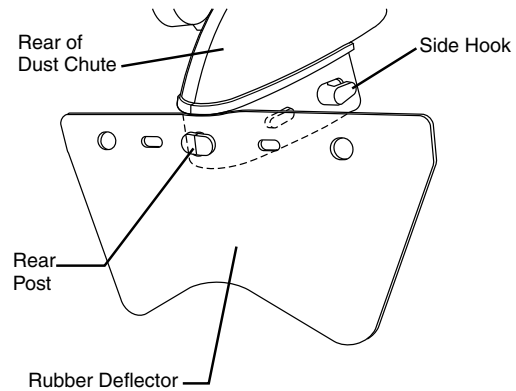


Figure 9. Attaching Rubber Deflector on Rear Post

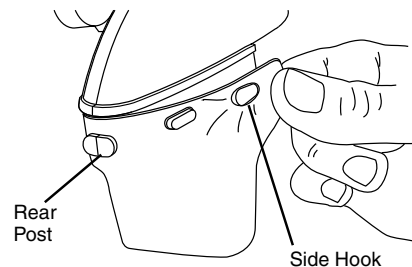


Figure 10. Attaching Rubber Deflector on Side Hooks

# Adjustments

## Using the Head Assembly Lock Pin

**⚠ WARNING** To avoid possible injury, disconnect plug from power source before performing any assembly, adjustments or repairs.

### Head Assembly Lock Pin

The head assembly lock pin (item 43 - page 9) is located on the right side of the pivot post (item 34 - page 9). It is used to hold the saw's head assembly in the DOWN position. This position prevents the head from bouncing up and down during transportation. This also makes the saw more compact for lifting and storage. This position is also required for some calibrating procedures.

### To Engage the Head Assembly Lock Pin

1. Check that the depth stop plate (item 33 - page 9) is disengaged, or pressed in to the left position.
2. Grasp the saw's main handle (item 3 - page 8) and press down on the head assembly.
3. While pressing the saw head down, push in on the head assembly lock pin. Release the head assembly. The head will be locked in the DOWN position (see Figure 11).

### To Disengage the Head Assembly Lock Pin

1. Grasp the main handle and press down on the head assembly.
2. While pressing the head down, pull out the head assembly lock pin. Release the lock pin, but maintain your grip on the main handle. Slowly allow the spring-loaded saw head to come up to the top of its travel and then release the handle.

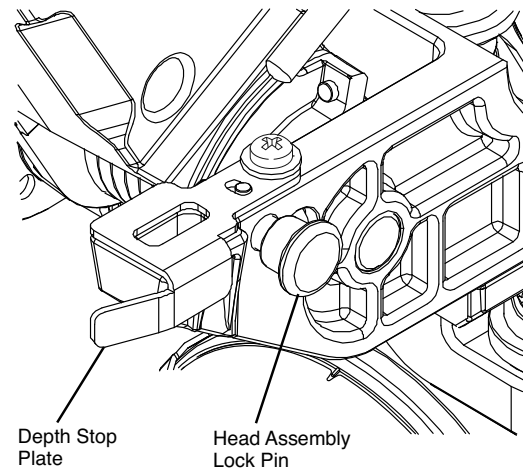


Figure 11

## Using the Glide Movement Controller

### To Adjust the Glide Movement Controller

The glide movement controller is attached to the upper joint of the glide mechanism; it is designed to control the smoothness of the saw's glide action. When assembled at the factory, the controller is not adjusted; therefore, the movement is very smooth. To adjust the glide mechanism's smoothness, slightly tighten or loosen the two screws at the top by using the 6/4mm hex key or a 4mm hex key (see Figure 12).

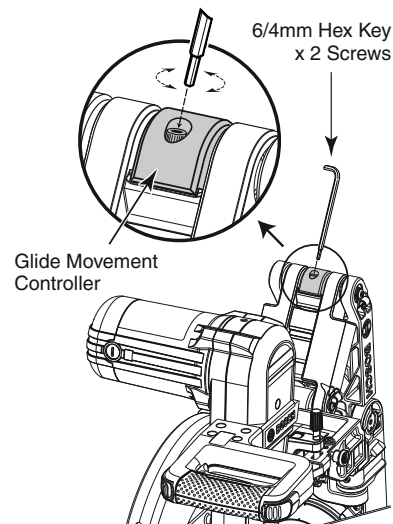


Figure 12

# Adjustments

## Using the Mechanism Lock Lever

**⚠ WARNING** To avoid possible injury, disconnect plug from power source before performing any assembly, adjustments or repairs.

### Mechanism Lock Lever

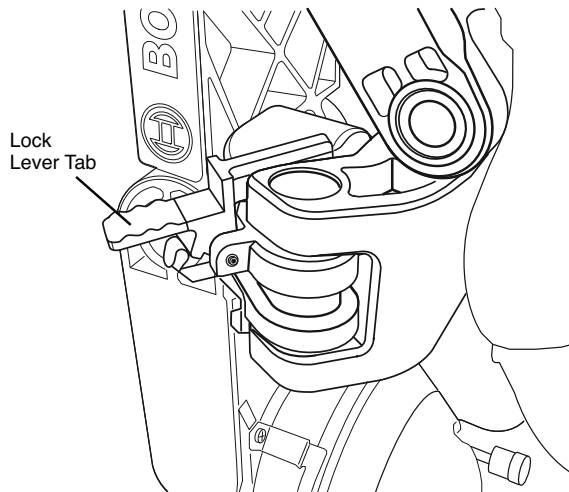
The lock lever (item 27 - page 9) is located on the rear left side of the mechanism.

When engaged, it locks the system (item 35 – page 9) in either the full forward or the full back position and prevents movement while transporting the saw. When held in the full back position, the saw is more compact for lifting and storage. The full back position is often used while performing chop cuts.

### To Engage the Lock Lever

#### With Saw in the Full Back Position –

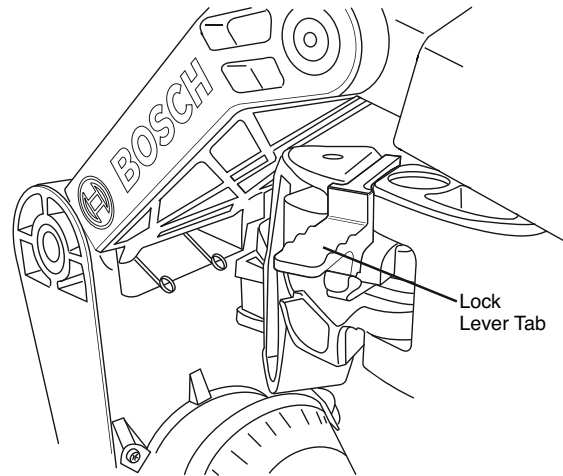
1. Grasp the saw's main handle (item 3 - page 8) and push (slide) the head assembly back as far as it goes. The upper housings will be upright and closed.
2. Lift the tab on the lock lever to engage its wedge into the joint area between the two lower housings. Release the lock lever tab and the main handle. The head assembly will be locked in the full back position.



**Figure 13.**  
To Engage in Back Position

#### With Saw in the Full Forward Position –

1. Grasp the main handle (item 3 - page 8) and pull (slide) the head assembly toward you as far as it goes. The mechanism will be fully extended.
2. Lift the tab on the lock lever to engage its wedge into the joint area between the two lower housings. Release the lock lever tab and the main handle. The head assembly will be locked in the full forward position.

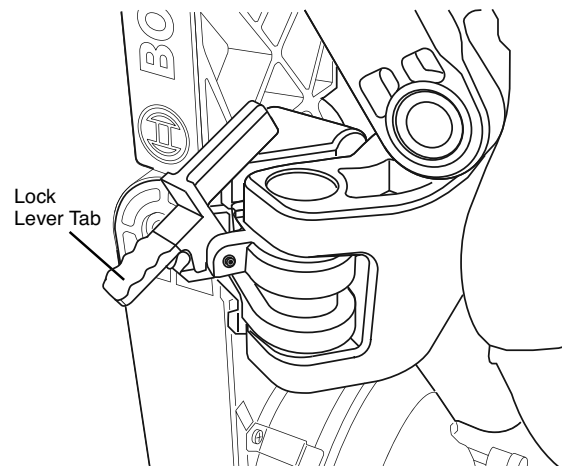


**Figure 14**

### To Release the Lock Lever

#### From Back or Forward Positions –

1. Grip the tab on the lock lever and press down until its wedge comes out from between the two lower housings. Release your grip; the mechanism is now free to slide forward and back.



**Figure 15.**  
To Release in Front or Back Position



# Adjustments

## Depth of Cut Adjustment

**⚠ WARNING** To avoid possible injury, disconnect plug from power source before performing any assembly, adjustments or repairs.

When a new blade is installed, it may be necessary to check the clearance of the blade to the turntable structure. The depth stop plate is a feature provided to allow for (normal) full-depth cuts or non-through cuts used to cut grooves.

### Setting Blade Depth for Normal Full-Depth Cuts

1. When making normal full-depth cuts, push the depth stop plate in toward the saw head (see Figure 16). This will allow the depth stop screw to pass through the hole in the plate.
2. Check for full depth of cut:
  - Set table at 0° miter and push saw fully back.
  - Pull out head assembly lock pin to the release position.
  - Push down saw head and watch the depth stop screw pass through the stop plate without any binding or contact with the plate.

### Setting Blade Depth for Non-Through Cuts for Cutting Grooves

NOTE: For best results, Bosch recommends the use of a table saw with an optional dado blade set for cutting grooves and non-through cuts. In the event this is not available, the feature described below is a convenient alternative.

1. Release (pull out) the head assembly lock pin and allow the saw head to move fully up. Slide saw head to the full back position.
2. Pull the depth stop plate out away from the saw head (see Figure 17).
3. Grip the main handle (item 3, page 8) and push down the saw head while watching the depth stop screw contact the top surface of the depth stop plate. The screw will not pass through the hole in the plate.
4. Turn the knob at the end of the depth stop screw (while the threaded end is in contact with stop plate) and watch the bottom of the saw blade move. This adjustment sets the depth of cut.

See page 44 for "Cutting Grooves" instructions.

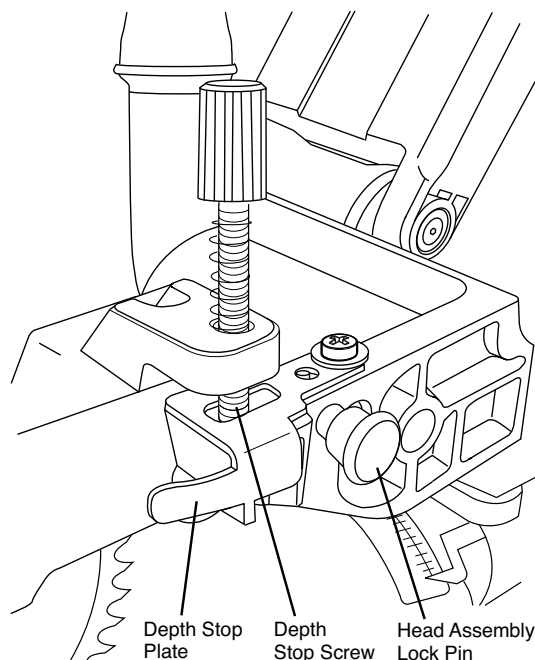


Figure 16

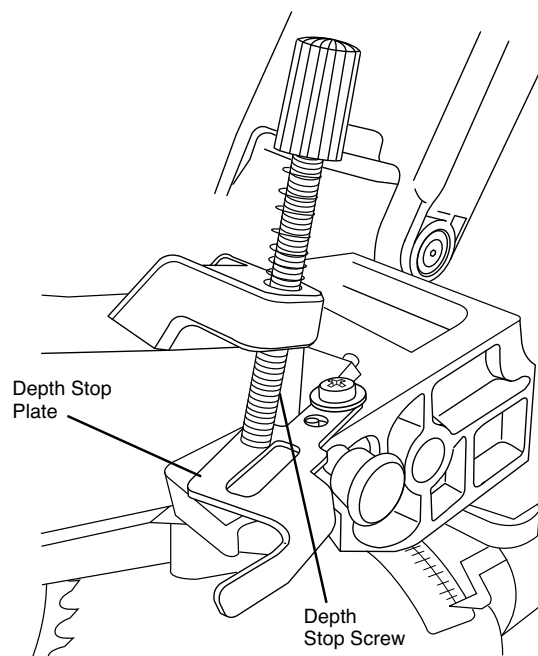


Figure 17

# Adjustments

## Miter Detent System – Adjustment Procedure

### Calibrating Miter Detent System

1. Engage the miter detent at the 0° position. Loosen the miter lock knob 1/2 turn.
2. Look for four round holes in the miter scale plate. In each hole is a screw. Use the small end of the 6/4mm hex key or a 4mm hex key to loosen all four screws 1 to 2 turns. This will loosen the miter detent plate (see Figure 18).

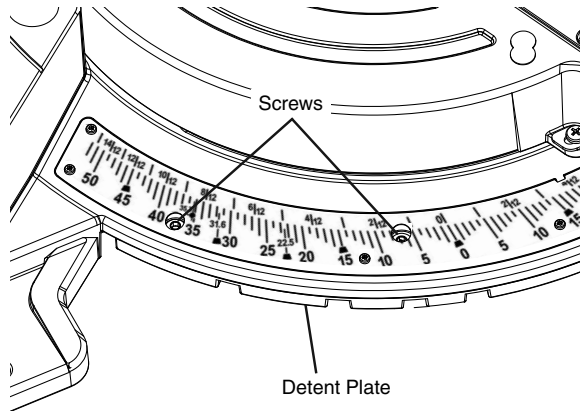


Figure 18

3. Lock saw down using the head assembly lock pin (item 43 – page 9).
4. Hold one side of a 90° combination square against the fence and rotate the table (and detent plate) until the side of the saw blade is in full contact with the other side of the square.

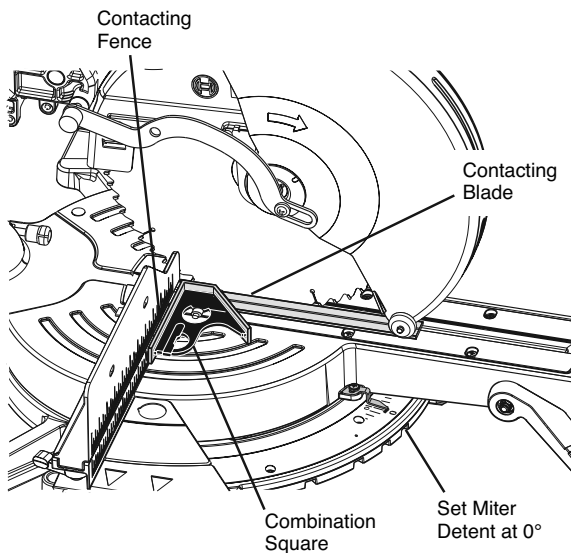


Figure 19

5. Tighten all four screws – loosen and reset the miter scale pointer to the “0” position.

### Miter Scale Pointer Adjustment

1. Rotate table to 0° position and lock in place.
2. Raise the head assembly to the full UP position.
3. Loosen the pointer adjust screw that holds the miter scale pointer in place (see Figure 20).
4. Position the pointer to align with the 0° line. Tighten the screw.

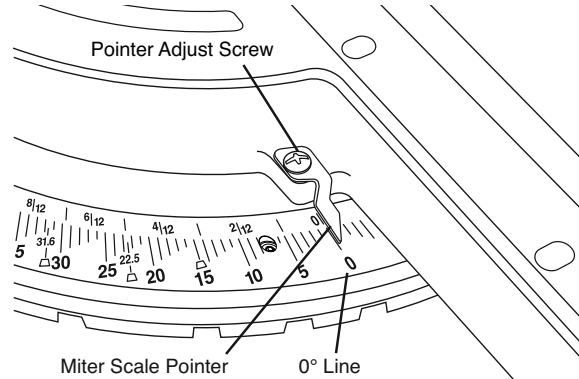


Figure 20. Miter Scale Adjustment

### Kerf Insert Adjustment

The kerf inserts should be adjusted close to the blade, but without touching the blade, to avoid tear-out on the bottom of the workpiece.

1. Hold the saw head assembly down and push in the head assembly lock pin (item 43 – page 9) to keep the saw in the DOWN position.
2. Loosen the six kerf screws using a #2 Phillips screwdriver.
3. Adjust the kerf inserts as close to the blade (teeth) as possible without touching the blade.
4. Tighten the kerf screws.

NOTE: At extreme bevel angles, the saw blade may slightly cut into kerf insert.

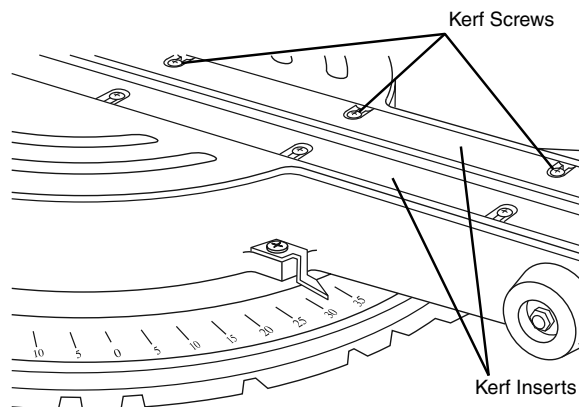


Figure 21. Kerf Inserts

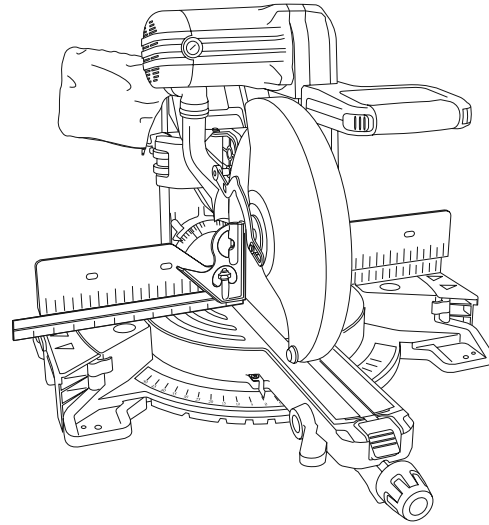
# Adjustments

## 0° Bevel Stop – Adjustment Procedure

**⚠ WARNING** To avoid possible injury, disconnect plug from power source before performing any assembly, adjustment or repair.

### Checking 0° Bevel Stop Setting

1. Hold the saw head assembly down and push in the head assembly lock pin (item 43 – page 9) to keep the saw in the DOWN position.
2. Slide the head assembly completely to the back and engage the lock lever (item 27 – page 9) by lifting up the finger tab.
3. Rotate the table to the 0° miter position.
4. Pull up the bevel lock lever to loosen.
5. Check the position of the bevel range selector knob; it should be at the “0-45° Left” position.
6. Tilt the saw assembly to the left (counterclockwise), then rotate to the right (clockwise) until it hits the stop in the vertical position – this is where the saw is currently set to make a 0° cut.
7. Push down the bevel lock lever to lock the angle position.
8. Use a combination square to check that the blade is 90° (square) to the table. Place the square’s ruler edge against the table and slide it to contact the blade with the vertical side of the square’s head (see Figure 22).



**Figure 22**

9. Check that the saw blade’s plate (not teeth) is touching the square’s 90° side. If the saw blade’s plate is not in full contact with the square’s body 90° side, follow the “Adjusting 0° Bevel Stop” procedures.

# Adjustments

## 0° Bevel Stop – Adjustment Procedure

**⚠ WARNING** To avoid possible injury, disconnect plug from power source before performing any assembly, adjustment or repair.

### Adjusting 0° Bevel Stop (Blade 90° to Table)

1. Pull up the bevel lock lever to loosen.
2. Loosen bolt heads “A” and “B” using a 10mm open end wrench or socket (with socket wrench). Loosen bolts at least one full turn (see Figure 23).
3. Loosen set screw “D” using the 4mm end of the 6/4mm hex key (provided with tool, but may also use a standard 4mm hex key). Loosen screw at least three full turns.
4. Place combination square on table and against blade (see Figure 22).
5. Using the 4mm end of hex key, turn set screw “C” and watch the saw blade tilt. Turn screw “C” until the blade is aligned (full contact) with the square’s body’s edge. After aligning, remove hex key.
6. Tighten set screw “D” using 4mm hex key.
7. Tighten bolt heads “A” and “B” using 10mm open end wrench.
8. Adjust bevel scale pointers (item 36 – page 9) to be in line with the bevel scale’s 0° lines.
9. Push down the bevel lock lever to lock.

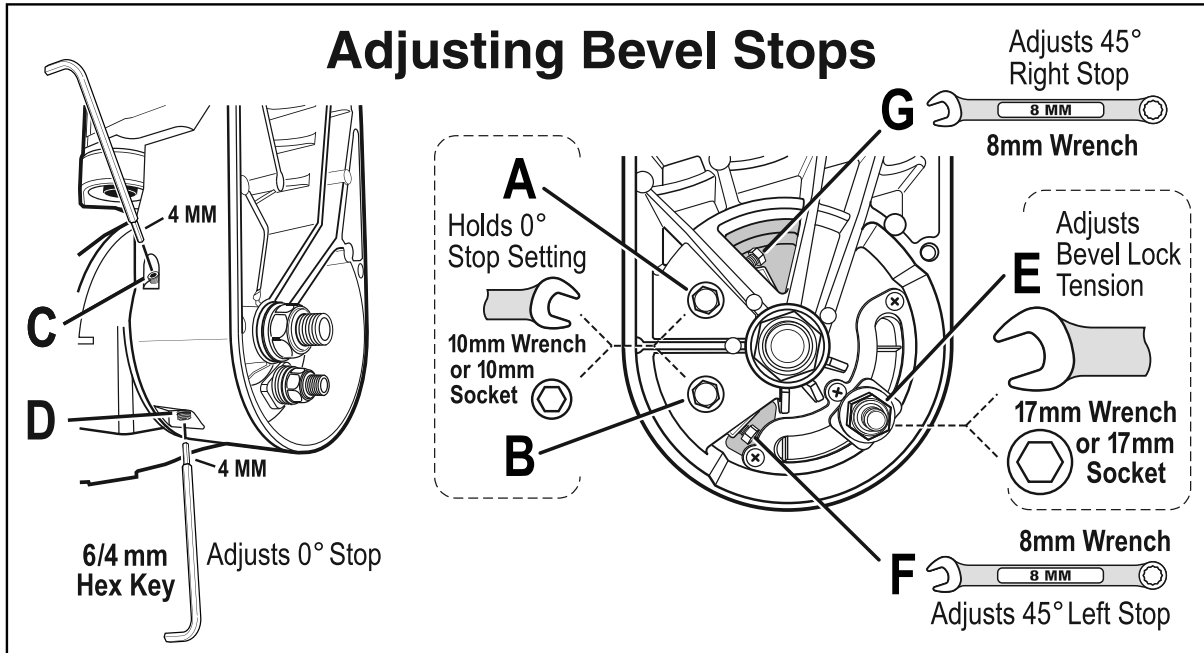


Figure 23

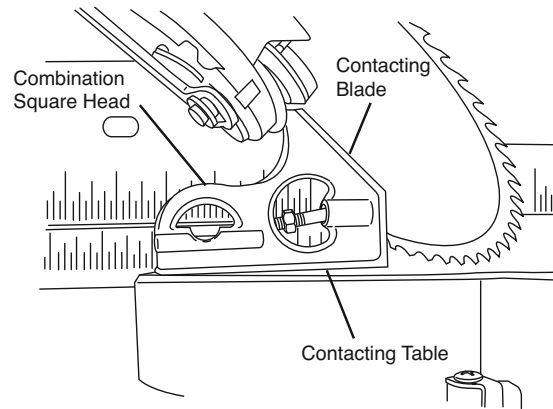
# Adjustments

## 45° Bevel Stop – Adjustment Procedure

**⚠ WARNING** To avoid possible injury, disconnect plug from power source before performing any assembly, adjustment or repair.

### Checking 45° Bevel Stop Setting

1. Hold the saw head assembly down and push in the head assembly lock pin (item 43 – page 9) to keep the saw in the DOWN position.
2. Slide the head assembly completely to the back and engage the lock lever (item 27 – page 9) by lifting up the finger tab.
3. Rotate the table to the 0° miter position.
4. Pull up the bevel lock lever to unlock. Move the left sliding fence fully to the left.
5. Check the position of the bevel range selector knob; it should be at the “0-45° Left” position.
6. Tilt the saw assembly to the left (counterclockwise) until it hits the 45° stop – this is where the saw’s 45° stop is set to make a 45° left bevel cut.
7. Use a combination square to check that the blade is 45° to the table. Remove the rule blade from the combination square. Place only the combination square’s head on the saw’s table with its long flat side resting on the table and its 45° side against the tilted blade (see Figure 24).



**Figure 24**

8. Check that only the saw blade’s plate (not teeth) is touching the square’s 45° side. If the saw blade’s plate is not in full contact with the square’s head 45° side, follow the “Adjusting 45° Bevel Stop” procedures.



# Adjustments

## 45° Bevel Stop – Adjustment Procedure

**⚠ WARNING** To avoid possible injury, disconnect plug from power source before performing any assembly, adjustment or repair.

### Adjusting 45° Bevel Stop (Saw Blade 45° to Table)

1. Pull up the bevel lock lever to unlock. Move the left sliding fence fully to the left.
2. Tilt the saw assembly to the left (counterclockwise) until it hits the 45° stop.
3. Place only the combination square's head on the saw's table with its long flat side resting on the table and its 45° side against the tilted blade.
4. Place an 8mm open end wrench on bolt head "F" (see Figure 25).
5. While turning bolt "F," watch the blade tilt – turn "F" until the saw blade plate is in full contact with the 45° side of the square's head (see Figure 24).
6. If needed, adjust bevel scale pointers (item 36 – page 9) to be in line with the bevel scale's 45° lines. First, adjust right bevel pointer; then tilt saw head to the right 45° stop position (see page 41 – "Bevel Range 2 = 0-45° Right") and adjust the left bevel pointer. Tilt the saw head to the 0° position – both pointers should be on the bevel scale's 0° lines.
7. Push down the bevel lock lever to lock at the desired bevel angle.

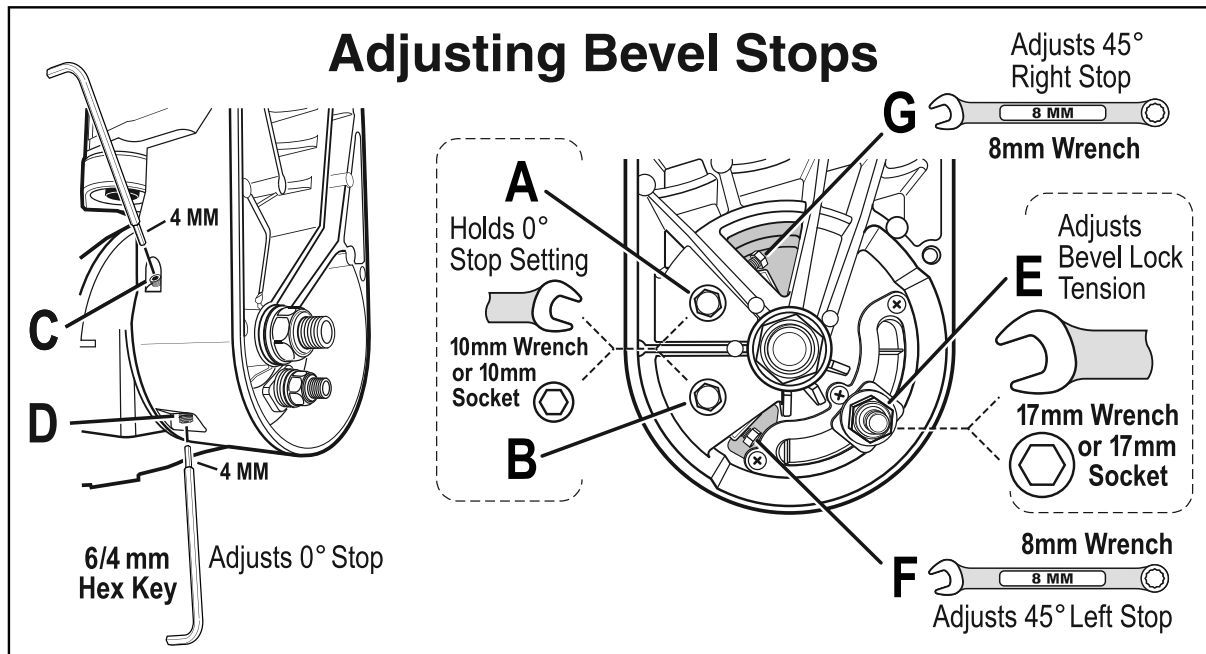


Figure 25

# Adjustments

## Adjusting Bevel Lock Tension

### Checking Bevel Lock Tension

1. Pull up the bevel lock lever to release tension. If it feels too hard to pull up, an adjustment may be required.
2. Check the tilt resistance. Grab main handle and slowly tilt the saw to the left. While tilting, some resistance should be felt. At approximately 30°, the resistance should become lower. If little or no resistance is felt, an adjustment may be required.
3. Check bevel lock tension. Push down on the bevel lock lever – normally more pressure is needed at the start; then the lever should go fully down to the lock position with a “thump”.
  - A) If it is too hard to push the lever fully down, then it may require tension adjustment.
  - B) Check locking power: Tilt the saw to about 30° and push down on bevel lock lever. Firmly press on the right side of the saw head - If the saw head tilts more than 1/2° from the locked position, then the bevel lock tension needs adjustment.

### Adjusting Bevel Lock Tension

The bevel lock lever tension has been set at the factory. After extensive use of the tool, it may require an adjustment. Before adjusting tension, the tilt resistance should be set.

1. Pull up the bevel lock lever to release tension.
2. **Adjusting Tilt Resistance** (see step 2 above).
  - A) If resistance is too low, slightly tighten (1/16th turn) the large lock nut “H” using a 24mm socket or wrench.
  - B) If resistance is too high, slightly loosen (1/16th turn) the large lock nut “H” using a 24mm socket or wrench.

3. **Adjusting Tension** (see steps 1 and 3 above) Pull up and push down the bevel lock lever.
  - A) If the lever is too hard to pull or push, the tension can be decreased by using a 17mm socket or wrench to loosen lock nut “E” (1/8th turn). Check again.
  - B) If the lever is too easy to pull or push or if the saw head does not fully lock at a bevel setting, then the tension can be increased by using a 17mm socket or wrench to tighten lock nut “E” (1/8th turn). Check again.

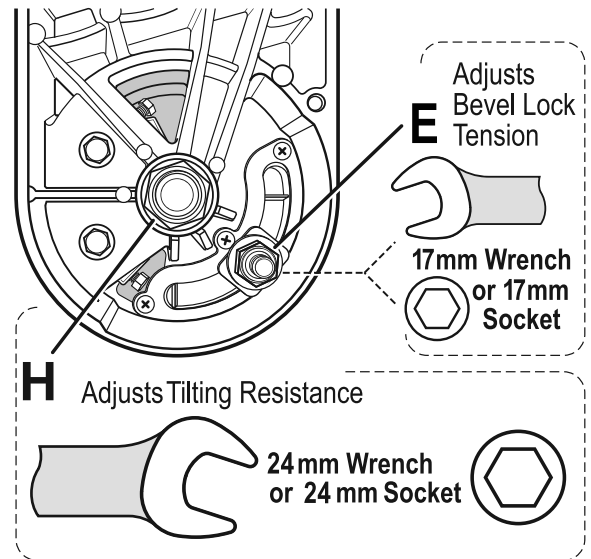


Figure 26

## Adjusting Front Stabilizing Bolt

The front stabilizing bolt is located on the bottom of the saw's base near the 0° miter detent slot (Figure 26a). It provides additional support when making slide cuts.

The stabilizing bolt has been factory set. If it is loose or needs adjustment, follow these steps:

1. Move the saw so that you have easy access to the bolt area. Loosen the stabilizing bolt and the jam nut using a 10mm wrench.
2. Place the saw back on your work table. Unscrew the stabilizing nut until it contacts the table.
3. Move the saw again so that you have access to the bolt area. While holding the head of the bolt with a 10mm wrench or pliers, use a 10mm open end wrench to fully tighten the jam nut against the boss in the saw's base.

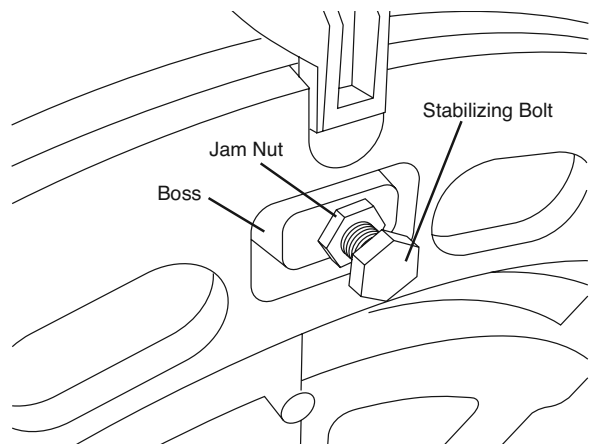


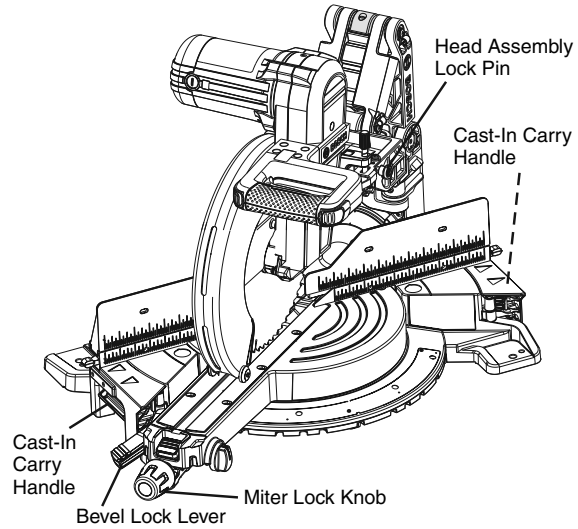
Figure 26a

# Transporting and Mounting

**⚠ WARNING** To avoid injury, follow all statements identified below by the BULLET (●) symbol.

- Never lift this saw by grasping the base extensions when they are in the extended position.
- Unplug electric cord and wind up. Use the hook and loop strap to hold the wrapped cord together.
- Never lift the saw by gripping any of the mechanism parts. The saw may move and cause severe injuries to your fingers or hands.
- To avoid back injury, hold the tool close to your body when lifting. Bend your knees so you can lift with your legs, not your back. Lifting the saw from the back is the preferred method. This will tip the tool toward your body.
- Never lift tool by holding switch handle. This may cause serious damage.
- Never lift the miter saw by the power cord or the operational handle. Attempting to lift or carry the tool by the power cord will damage the insulation and the wire connections, resulting in electric shock or fire.
- Place the saw on a firm, level surface where there is plenty of room for handling and properly supporting the workpiece.

**ONLY** lift this saw by the cast-in carry handles at each side of the bottom of the base (see Figure 27).



**Figure 27**

## Lifting Saw from Rear

1. Set bevel angle at 0° and lock in place using the bevel lock lever.
2. Rotate table to the extreme left position and lock in place using miter lock knob.
3. Push saw head back and lock in DOWN position using the head assembly lock pin.
4. Engage mechanism lock lever so the saw is locked in the retracted position.
5. Check that each base table extension is in the closed position and locked in place.
6. Use both hands and reach down to grip each cast-in carry handle. Whenever possible, lift from the back of the saw.

# Transporting and Mounting

## Mounting Applications

### Workbench Permanent Attachment

1. Each of the four mounting holes should be bolted securely using 5/16" bolts, lock washers and hex nuts (not included).
2. Locate and mark where the saw is to be mounted.
3. Drill four 5/16" diameter holes through workbench.
4. Place the miter saw on the workbench, aligning holes in base with holes drilled in workbench. Install bolts, lock washers and hex nuts.

### Alternate Attachment

The smaller mounting holes at each corner can be used for nails or longer drywall screws.

The supporting surface where the saw is to be mounted should be examined carefully after mounting to ensure that no movement can occur during use. If any tipping or walking is noted, secure the workbench or stand before operating the miter saw.

**CAUTION** Be careful not to over-drive nail or over-torque the bolt. This could crack foot or damage base.

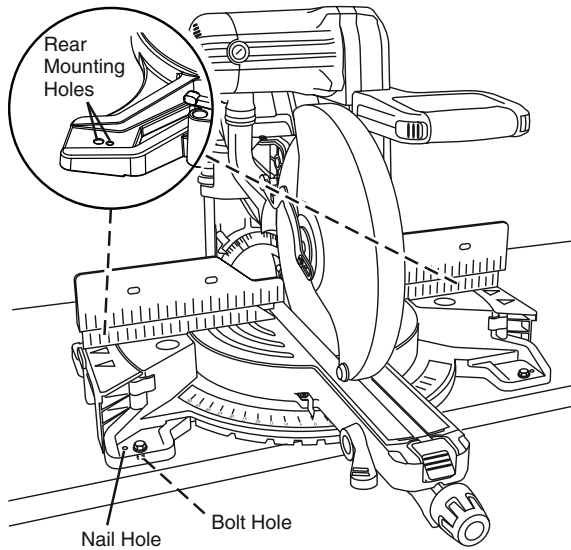


Figure 28. Workbench Mounting

### Temporary Mounting Using Clamps

- If necessary, clamp the miter saw to a workbench or table top.
- Place two or more "C" clamps on the clamping areas and secure (see Figure 29). There are clamping areas at all four corners of the saw.
- Be careful not to place clamps over the base extension clamping levers (see Figure 29).
- Mounting with clamps may prevent access to some wide miter angles.

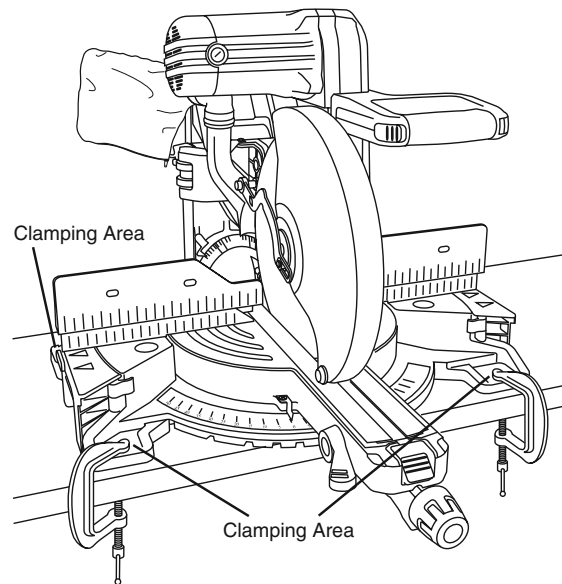


Figure 29. Temporary Mounting Using Clamps

# Preparing for Saw Operations

## Body and Hand Position

**⚠ WARNING** Position your body and hands properly to make cutting easier and safer. Failure to follow all instructions, identified below by bullet (●) symbols, may result in serious personal injury (see Figure 30).

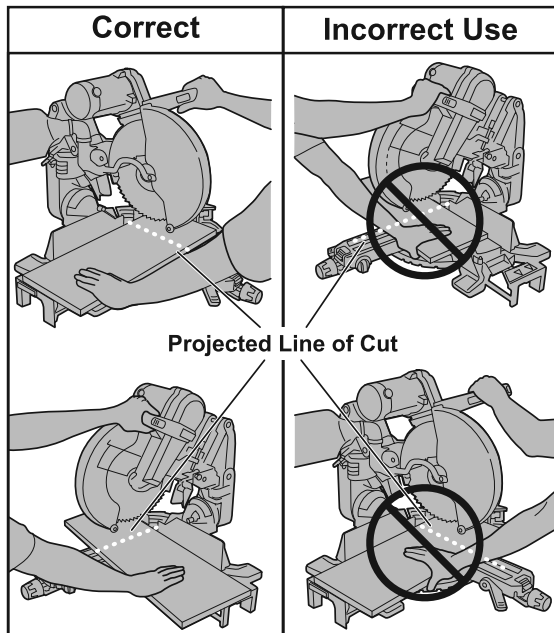


Figure 30. Hand Positions

- Never place hands near cutting area. Keep hands and arms outside the “NO HANDS” zone.

**“NO HANDS” ZONE** – is defined as the entire table plus the fixed portion of the base on the right and left side of the table and portions of the fence within this boundary. This zone is labeled with “No Hands” symbols placed on the fixed base.

- Be aware of the path of the saw blade. Make a **DRY RUN** with the saw “OFF” by conducting a simulated cutting cycle, and observe the projected path of the saw blade. Keep hands out of the path of saw blade.

**DRY RUN** – It is important to know where the blade will intersect with the workpiece during cutting operations. Always perform the simulated cutting sequence with the power tool switched “OFF” to gain an understanding of the projected path of the saw blade. Mentally note where the path of the saw blade will fall and set up your work to keep your hands and arms out of the path of the spinning blade. Adjust your clamps and fences so that the smooth lower guard and cutting action is not interfered with during cutting operation (see Figure 30).

- Hold workpiece firmly against table and fence to prevent movement.
- Keep hands in position until trigger has been released and blade has completely stopped.
- Never place hands on mechanism components.
- Keep feet firmly on the floor and maintain proper balance.
- Follow the miter arm when mitering left or right. Stand slightly to the side of the saw blade.

**⚠ WARNING** The lower guard may not automatically open under certain cutting conditions; for example, when trying to cut workpieces that are near the maximum cutting height capacity. Under these conditions or during the blade travel motion of cut, the workpiece can stop the lower guard movement before the downward motion of the arm could pre-open the lower guard.

If this occurs:

Workpiece must be securely clamped. This frees a hand to raise the guard by the lip just enough to clear the workpiece (see Figure 31).

Start the saw and begin your cut.

Once you have cleared the position where the lower guard may bind, release the guard and it will continue to operate automatically as you cut.

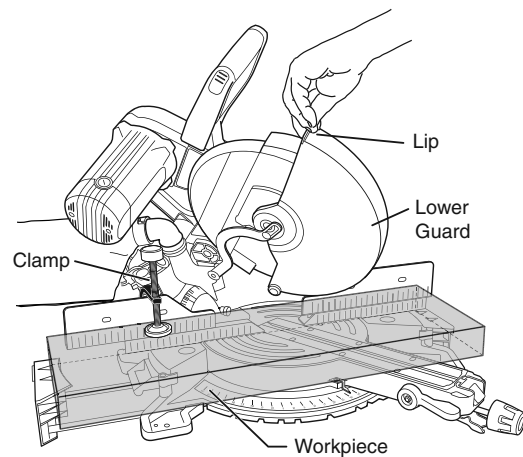


Figure 31. Raising Lower Guard



# Preparing for Saw Operations

## Workpiece Support

### Clamps

**Using the Workpiece Clamp** – This clamp easily secures a workpiece to the table or base.

1. Insert the clamp's knurled bar down into a clamp post hole; there are two post holes located in the base behind the fence. The knurled end must be in the post at least 1/2".
2. Slide the clamp down until its rubber foot contacts the workpiece.
3. Adjust the clamp height so it does not touch the sliding fence.
4. Rotate the clamp's knob until the workpiece is firmly held in place.
5. Move saw head up and down and forward and back to be sure it clears the clamp.

**▲WARNING** There may be extreme compound cuts where clamp cannot be used. Support workpiece with your hand outside the "No Hands" zone. Do not try to cut short pieces that cannot be clamped and cause your hand to be in the "No Hands" zone.

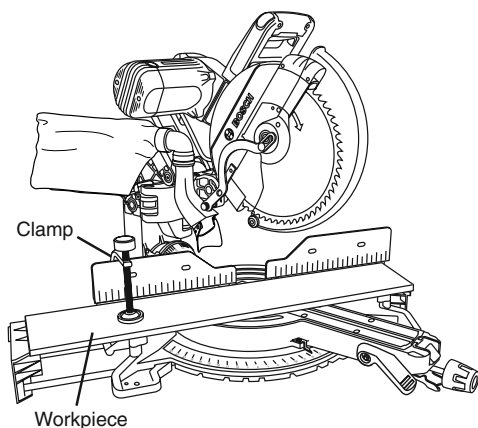


Figure 32. Workpiece Clamp

**Clamps** – Other hold-down devices such as C-clamps can be used to hold the workpiece firmly against the table and the fence. Make sure the clamps are clear of the cutting path.

### Sliding Fences

**▲WARNING** To provide sufficient (minimum 6") spacing from hand to saw blade, extend the sliding fences and base extensions when making extreme bevel, miter or compound cuts.

#### Operating Sliding Fences

1. Pull the fence lock lever toward front of tool to loosen fence.
2. Slide fence to the desired position.
3. Push the lock lever toward rear of tool to lock fence position.

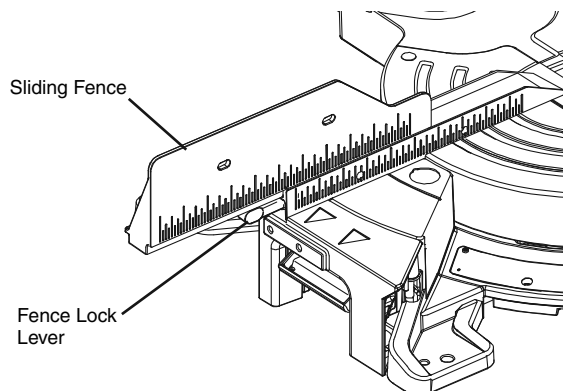


Figure 33

#### Removing Sliding Fences

1. Lift up on the cover plate tab and rotate it away from the fence.
2. Push the lock lever toward the saw head to loosen the fence.
3. Slide the fence all the way out, away from the saw head.
4. Lift up on the sliding fence to remove.

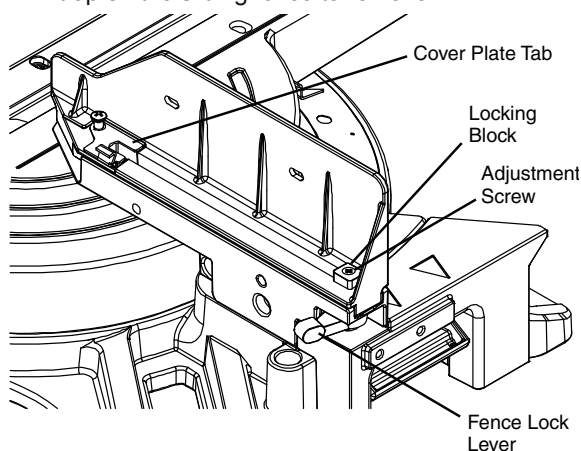


Figure 34

#### Adjusting Sliding Fence Lock Lever

1. If the sliding fence does not operate as described, it needs adjustment. Remove sliding fence – see above.
2. Push firmly down on the locking block to expose the adjustment screw – Using a #2 Phillips screwdriver, turn the screw 1/12 turn to the next notch in block.  
Left Fence: To tighten lock - turn the screw counter-clockwise. To loosen - turn the screw clockwise.  
Right Fence: To tighten lock - turn screw clockwise. To loosen - turn screw counter-clockwise.
3. Release the locking block back to its up position.
4. Replace sliding fence by putting its large square hole over the locking block. Slide fence fully in and close the cover plate tab. It should move freely and be locked tightly anywhere along its range of travel.

# Preparing for Saw Operations

## Workpiece Support

### Long Workpiece Support

**⚠ WARNING** Long workpieces have a tendency to tip over unless clamped down and properly supported from underneath.

**Operating Base Extensions** – These extensions provide extra workpiece support and are especially useful when cutting long workpieces. To reposition the extensions, simply unlock the base extension lock levers, reposition the extensions and relock the levers (see Figure 35). The left extension lock lever tightens by rotating clockwise and the right lock lever tightens by rotating counterclockwise.

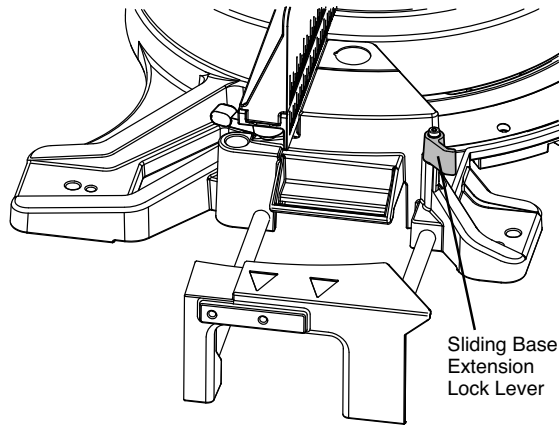


Figure 35. Sliding Base Extensions

### Additional Workpiece Support

**Blocks** – Long pieces need extra support. The base height (3-3/4") is designed to match the standard lumber of two 2xs and one 1x. Boards of these thicknesses can be used to create auxiliary support extensions for long workpieces (see Figure 36).

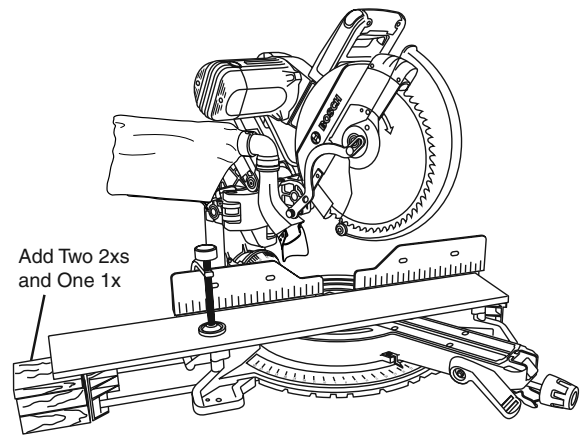


Figure 36. Block Support

# Preparing for Saw Operations

## Making an Auxiliary Fence

Certain types of molding need a fence face extension because of the size and position of the workpiece. Holes are provided in the fence to attach an auxiliary fence. The auxiliary fence is used with the saw in the 0° bevel position only.

1. Place a piece of wood against the miter saw fence (see Figure 37). Wood can have a maximum height of 5-1/2". Check that auxiliary fence assembly does not interfere with head assembly. See dimension drawing – Figure 38.
2. Mark the locations of the support holes on the wood from the back side of the fence.
3. Drill and countersink the holes on the front of the support board.
4. Fasten from front of fence: Attach (each) auxiliary fence using two (2) 3/16" flat head machine screws. With 3/4" auxiliary fence, use 1-1/2" long screws. Secure behind metal fence with washer and machine nuts.

Fasten from back of fence: With 3/4" auxiliary fence, use 1/4" round head wood screws (3/4" long). Drill four pilot holes through auxiliary fence and run screws from rear of metal fence.

5. Make a full depth cut to create the blade slot. Check for interference between the auxiliary fence and the lower blade guard. Make adjustments as necessary.

6. For best splinter-free cuts, use the chop cut method.
7. When making slide cuts, the center must be notched out per pattern (see Figure 38).

**⚠ WARNING** Check for interference from any components.

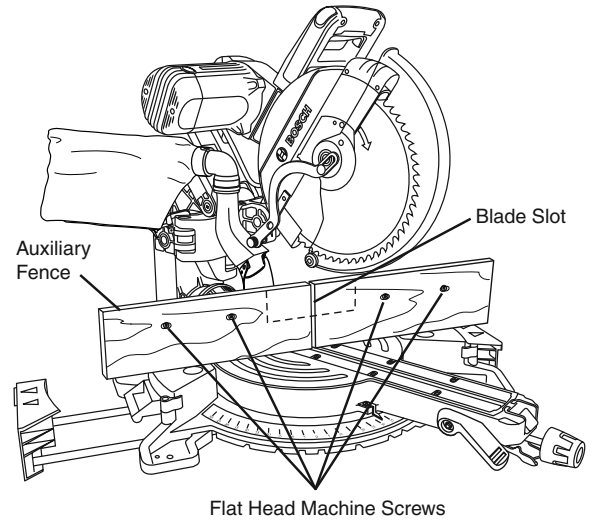


Figure 37. Auxiliary Fence

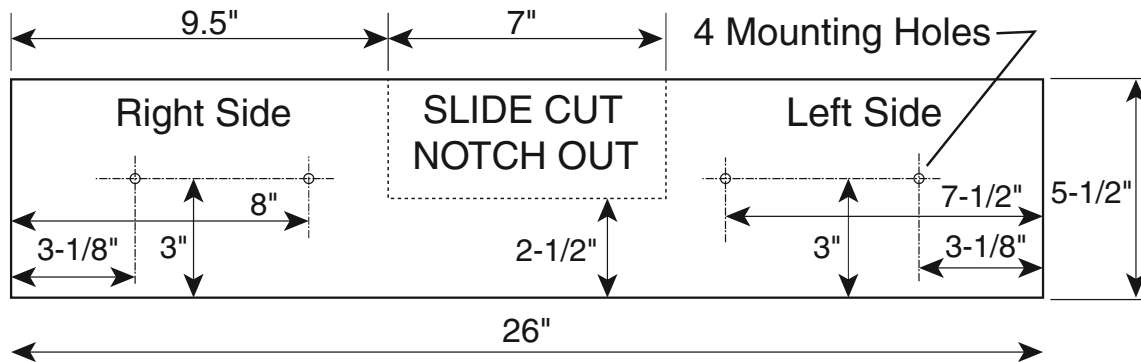


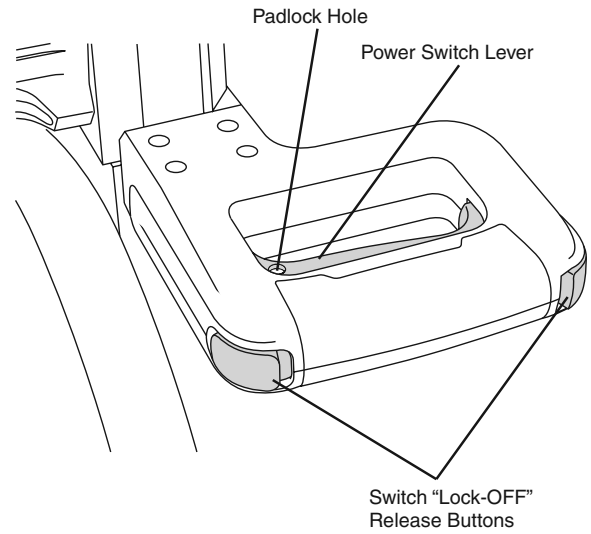
Figure 38. Tall Auxiliary Wood Fence - 3/4" Thick

# Saw Operations

## Switch Activation

For safety, the switch lever is designed to prevent accidental starts. To operate safety switch, press the switch "Lock-OFF" button with either thumb to disengage the lock, then pull the power switch lever and release the switch "Lock-OFF" release button (see Figure 39). When the power switch lever is released, the switch "Lock-OFF" button will engage the safety switch automatically, and the lever will no longer operate until either "Lock-OFF" button is pressed again.

NOTE: The power switch lever is made with a hole to accommodate a long shackle padlock to prevent unauthorized use of the saw (padlock is not provided with tool). The lock's shackle diameter may be up to 1/4".



**Figure 39. Switch Activation**

# Saw Operations

## Using Miter Detent System

1. Loosen the miter lock knob about 1/2 turn.
2. Grip the lock knob, and then reach down with your index finger to pull up on the miter detent lever – pull lever until it is out from the detent plate.
3. While gripping the lock knob and lever, rotate the saw's table. Stop table rotation at the desired angle as indicated by the miter scale pointer.
4. Release the lever into a detent in the detent plate or at an angle between detents. If close to a detent, use the detent override feature.
5. Tighten the miter lock knob before cutting.

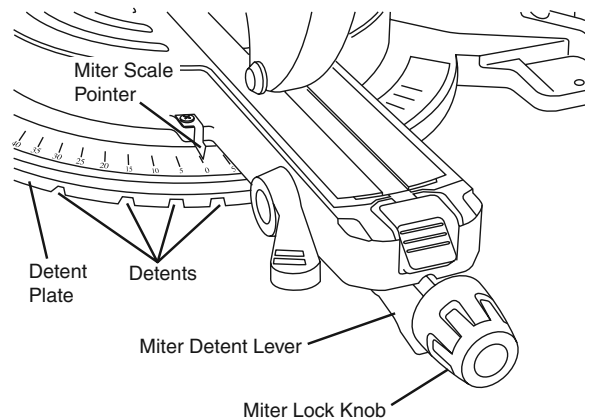


Figure 40

## Miter Detent Override

The miter detent override system locks out the automatic detent action. When the desired miter angle is close to a standard detent slot, this feature will hold the detent lever wedge from engagement (i.e., the user wants to be at 44-1/2°, but detent wedge wants to pop into the 45° detent). When the detent override is used, the detent system is disabled and the table will move smoothly to any position within its range.

### Engaging the Miter Detent Override

1. Pull up and hold the miter detent lever – the lever is located under the turntable's front arm (see Figure 41).
2. Press down on the top half of the detent override button and then release hold of the detent lever. The override button will remain in the DOWN position (see Figure 41).
3. The turntable is free to rotate.

**⚠ WARNING** With the table free to rotate, the miter lock knob must be tightened before attempting any cutting.

### Disengaging the Miter Detent Override

1. Pull up the miter detent lever and the detent override system will automatically disengage. The override button will return to the UP position.
2. Loosen the miter lock knob to allow the table to rotate to a new position – the detent lever is now free to engage the preset detent slots.

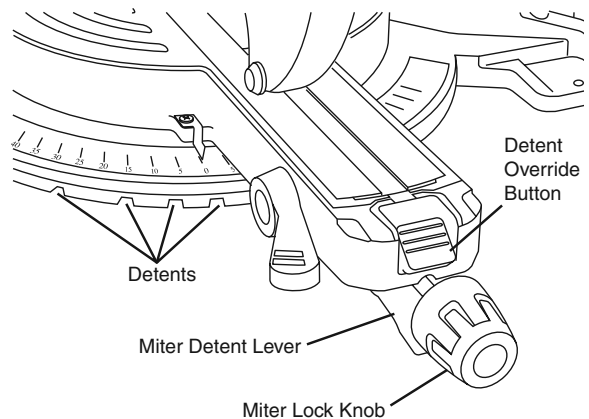


Figure 41. Detent Override

# Saw Operations

## Chop Cuts

### What's a Chop Cut – Saw Features

- A “chop cut” is a cross-cut made when the saw is held to the rearmost position and is operated like a conventional (non-sliding) miter saw. Using the chop cut method lowers the cross-cutting capacity; however, many users prefer using this method because it is quicker when making repeat cuts. This method can also produce more accurate cuts because the saw head is locked in the retracted position.
- This saw has bevel angle stops that accurately stop at critical angles: 45° Left/Right and 0° Right. It comes factory-set and should not require adjustment. However, after extensive use or if the tool has received a hard impact, it may require an adjustment.
- A chop cut can cut pieces with a width of 5-1/2" or less

### Preparing for Chop Cut

1. With the saw head in the UP position, push it back over the fence to the rear.
2. Engage the mechanism lock lever (item 27 – page 9) by lifting up the finger tab. Check that mechanism movement is stopped.
3. Properly position your workpiece and clamp it firmly to the table and/or fence.

**⚠ WARNING** Use clamping position that does not interfere with operation. Before switching “ON,” lower head assembly to make sure clamp clears guard and head assembly.

### Making a Chop Cut

1. Activate the switch, then fully lower the saw head to make the cut.
2. Hold the saw head down until the blade comes to a complete stop. Return the saw head to the UP position. Remove workpiece.

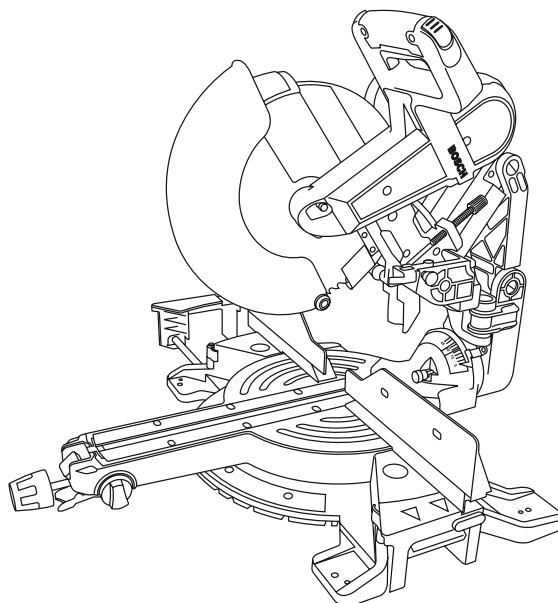


Figure 42. Chop Cut



# Saw Operations

## Slide Cuts

### What's a Slide Cut – Saw Features

- A “slide cut” is made with the head assembly unlocked and able to move away from the fence. This movement is supported and precisely controlled by the axial glide system. The maximum cross-cutting capacity is utilized by using this method.
- A slide cut is best used for cross-cutting workpieces wider than can be done with a chop cut – pieces wider than 5-1/2" and up to a maximum width of 13-3/8" across.

**⚠ WARNING** NEVER pull the saw toward you during a cut. The blade can suddenly climb up on top of the workpiece and force itself toward you.

### Preparing for Slide Cut

1. Place the saw head in the UP position.
2. Disengage the mechanism lock lever (item 27 – page 9) by pushing down on the finger tab. With the head assembly in the UP position, move it fully to the front and back to check that axial glide system moves smoothly.
3. Properly position your workpiece and clamp it firmly to the table and/or fence.

**⚠ WARNING** Use a clamping position that does not interfere with operation. Before switching “ON,” lower head assembly to make sure clamp clears guard and head assembly.

### Making a Slide Cut

1. Grasp the switch handle and pull the saw head assembly (in UP position) away from the fence – see Arrow 1 in Figure 43.
2. Activate the switch, and then fully lower the saw head assembly – on larger pieces, this action may also start the cut – see Arrow 2 in Figure 43.
3. Push down and back so the saw head assembly moves toward the fence and to the full rear position until you complete the cut. See Arrow 3 in Figure 43. NOTE: If high resistance is felt, do not apply excessive force – stop cutting, wait until blade stops and investigate problem.
4. Hold the saw head down until the blade comes to a complete stop. Return the saw head to the UP position and remove the workpiece.

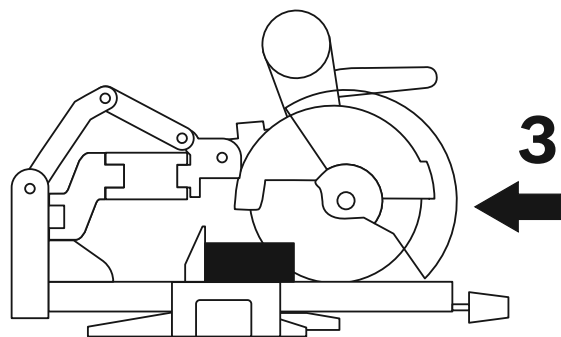
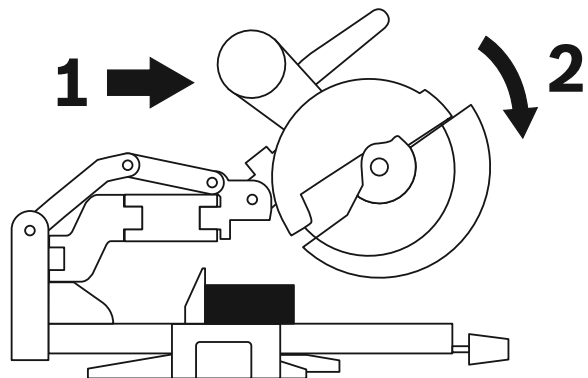


Figure 43. Slide Cut

# Saw Operations

## Miter Cuts

### What's a Miter Cut – Saw Features

- A “miter cut” is a cross-cut made with the blade perpendicular to the horizontal table. The blade is not tilted and the bevel pointers are both on the 0° lines.
- Miter cuts can be made at any angle across a workpiece within this saw’s range, from 52° left to 60° right.
- The miter scale shows the angle of the blade relative to the saw’s fence. The miter pointer is attached to the turntable and indicates the saw’s miter position before the cut is made.
- Ten positive detents are provided for fast and accurate preset miter angles – locations are at 45°, 31.6°, 22.5°, 15° left and right, and center at 0°. The right side has an additional detent of 60°.

- The crown molding detents on the left and right are at 31.6° for compound cutting 38° “spring angle” crown molding lying flat on the table (see Cutting Crown Molding on page 45).
- For precision settings at miter angles very close to the miter detents, use the miter detent override to prevent the detent from automatically engaging the detent slot. See detent override instructions on page 33.
- A miter cut can be made either as a chop cut or slide cut, depending on the width of the workpiece.
- The kerf inserts should be adjusted to be as close to the blade as possible to reduce splintering (see kerf insert instructions on page 20).

### Reading the Miter Scale

The miter scale used on this saw includes several scales of information to help the user accurately preset this saw before making the cuts (see Figure 44).

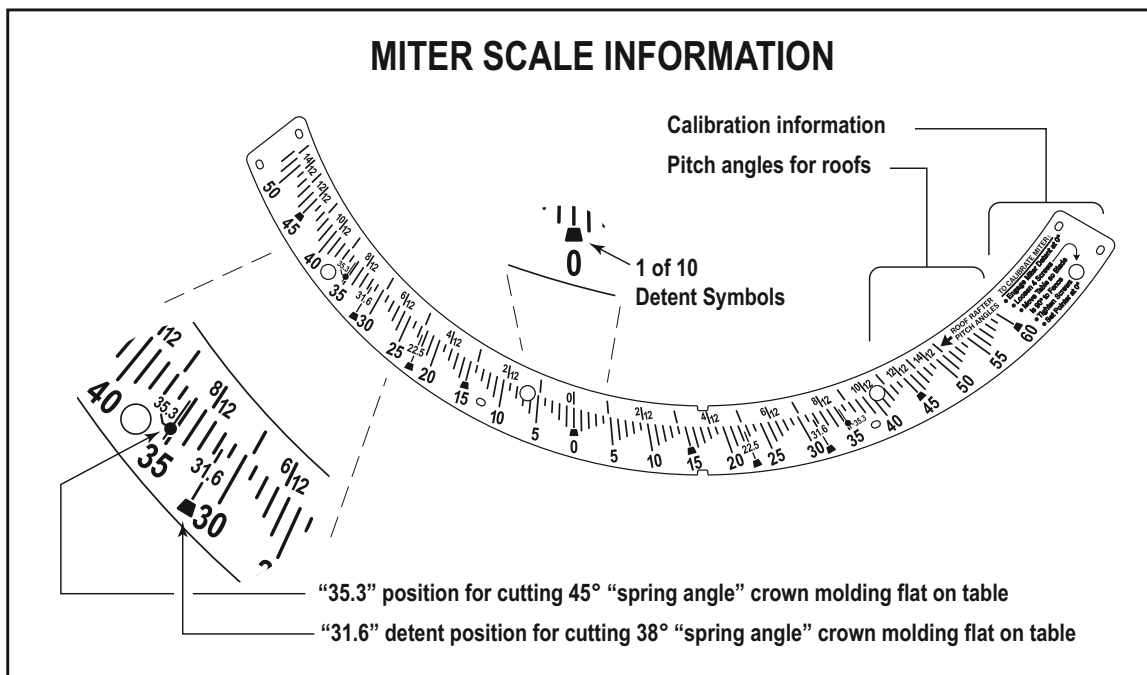
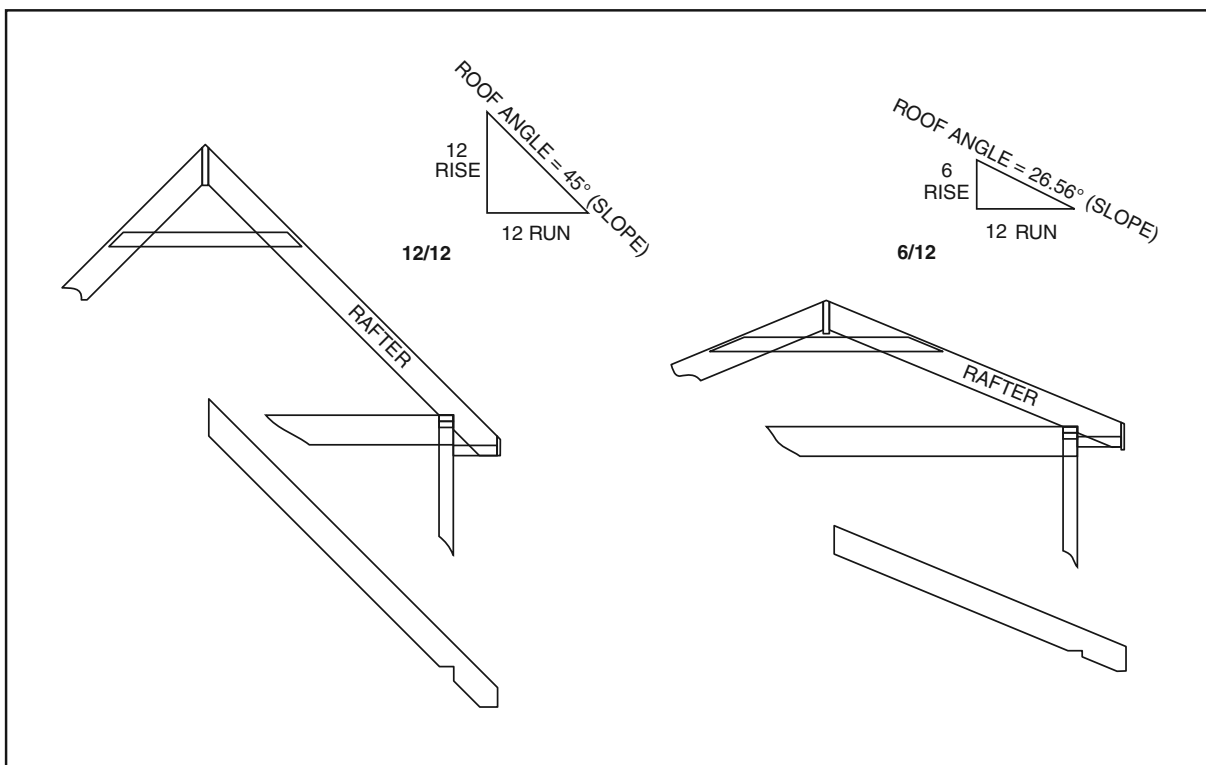


Figure 44. Miter Scale Information

# Saw Operations

## Miter Cuts

**Pitch angle information** – The top section of the miter scale shows angle settings required to cut roof rafters to the “Pitch Angle” system. 2/2, 4/12, 6/12, etc., are all pitch angles. This system is based on using the English “inches.” A 6/12 pitch angle roof equals a ratio of 6” “rise” for every 12” “run” (see Figure 45).



**Figure 45. Pitch Angle Cutting – Common Roof Rafters**

**Crown molding information** – There are miter position settings for compound-cutting crown molding flat on the table. Crown molding with 38° “spring angle” uses the 31.6 setting (with detent) and crown molding with 45° “spring angle” uses the 35.3 setting. NOTE: This cutting method also requires that specific bevel angles are set – see Cutting Crown Molding on page 45.

# Saw Operations

## Miter Cuts

**Miter cutting 6-1/2" base boards** – This saw can miter cut 6-1/2" tall base boards vertically positioned against the fence at any angle from 0° to 52°. All angled cuts must be made with the base board placed on the left side of the table. For certain cuts, the base board will have to be flipped upside down or placed with the face side against the fence. Always use a C-clamp to hold the base board to the fence before making cuts. NOTE: For cutting standard base board up to 4-1/4" tall, no special placement is required and it can be miter cut at any angle left or right.

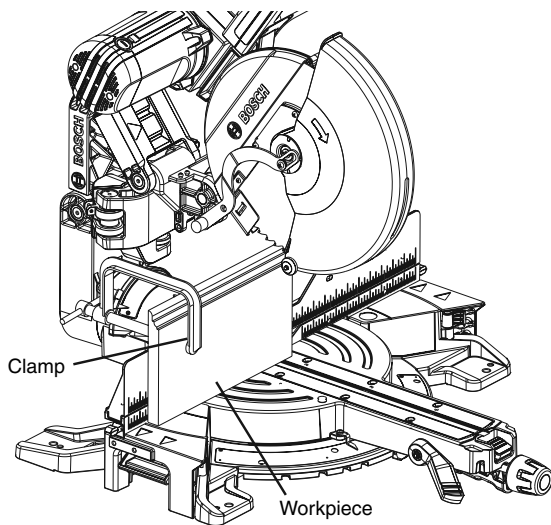


Figure 46

### Setting Saw to Make a Miter Cut

1. See Using Miter Detent on page 33.
2. Loosen the miter lock knob. Lift miter detent lever and move the saw to the desired angle, using either the detents or the miter scale. Tighten miter lock knob (see Figure 47).
3. Extend the base extensions and fence on the side on which the cut will be made (see Workpiece Support on page 29).
4. Properly position workpiece. Make sure workpiece is clamped firmly against the table or the fence.

**⚠ WARNING** Use a clamping position that does not interfere with operation. Before switching "ON" saw, lower saw head to make sure the clamp clears guard and head assembly.

5. Follow procedures for either chop cut or slide cut (see pages 34-35).
6. Wait until saw blade comes to a complete stop before returning head to the raised position and then remove workpiece.

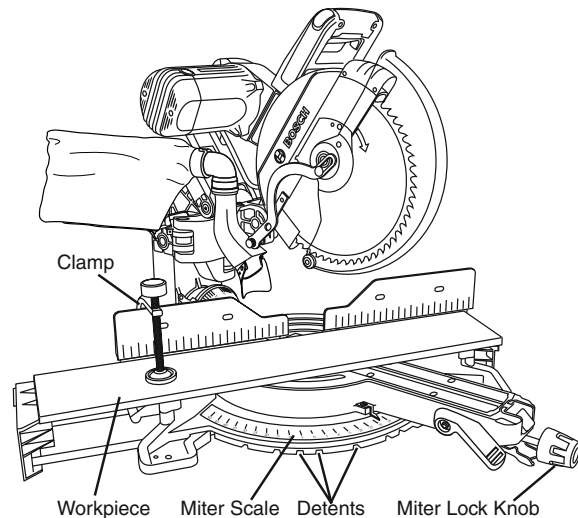


Figure 47. Miter Cut

# Saw Operations

## Bevel Cuts

### What's a Bevel Cut – Saw Features

- A “bevel cut” is a cross-cut made with the blade perpendicular to the fence and with the table set at 0° miter. The blade can be tilted to any angle within the saw’s range: the left is 0 to 47° and the right is 0 to 47°.
- The bevel scale is sized and positioned for easy reading – see Figure 48.

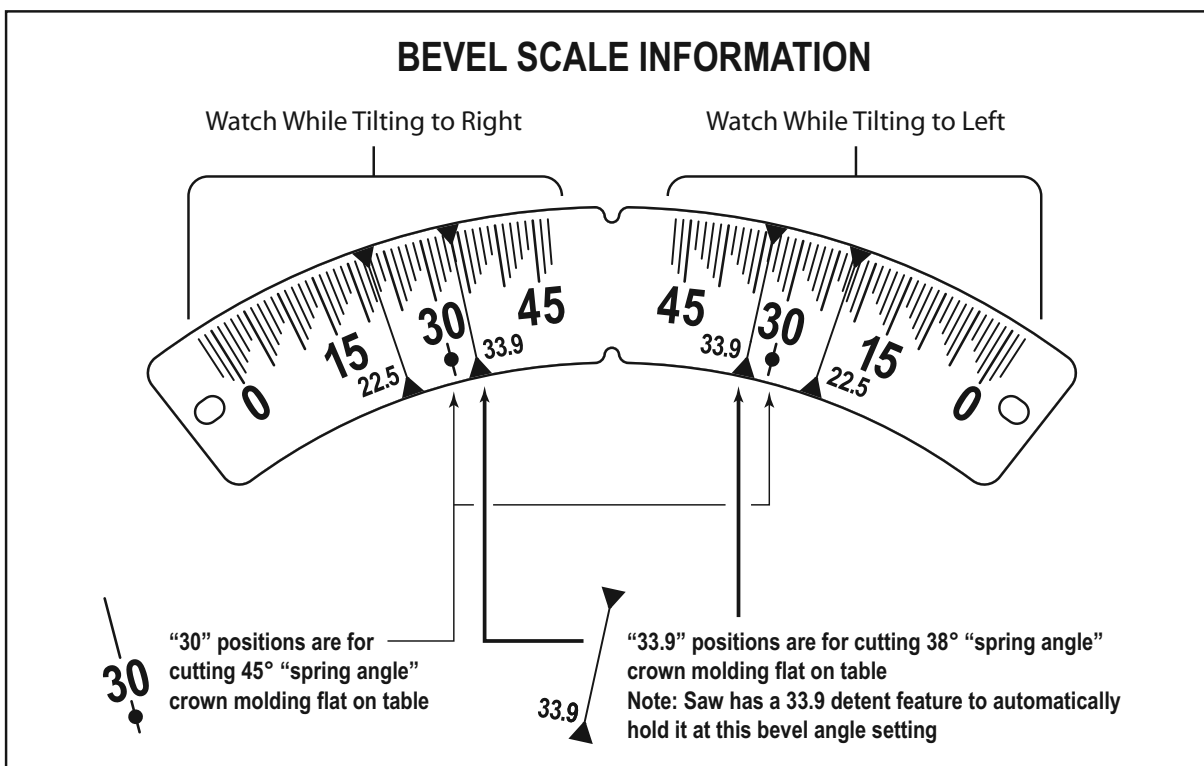


Figure 48. Bevel Scale Information

# Saw Operations

## Bevel Cuts

**Bevel range selector knob** – This saw has a front control on the right side of the table arm. This is called the bevel range selector knob (item 41 – page 9). It is linked to stops and locking mechanisms in the rear which control the tool's ability to quickly and accurately be positioned to make bevel cuts. There are positive stops at the important 45° left, 0° (vertical), and 45° right angles (see Figure 49).

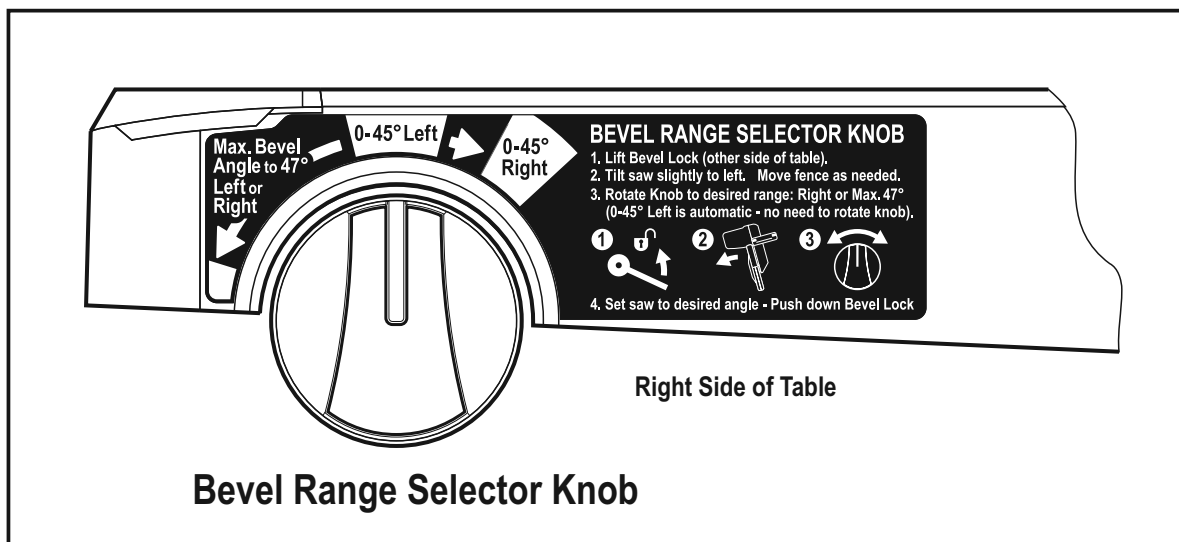


Figure 49. Bevel Range Selector Knob – Right Side of Table



# Saw Operations

## Bevel Cuts

### Using the Bevel Range Selector Knob

#### Bevel Range 1 = 0-45° Left

This left-side bevel range is the default setting.

#### To operate in Bevel Range 1:

1. Move the left sliding fence out to clear saw assembly and relock (Figure 51).
2. Lift bevel lock lever above table height with left hand.
3. Grasp the main handle with the right hand and tilt the saw assembly to the angle desired.
4. Once in the desired bevel position, hold the saw assembly with right hand and use left hand to fully press down the bevel lock lever below table height.

NOTE: Without turning the saw "ON," perform a dry cut to make sure the fence clears the guards and adjust if necessary.

#### Bevel Range 2 = 0-45° Right

#### To operate in Bevel Range 2:

1. Move the right sliding fence out to clear saw assembly and relock (see Figure 51).
2. Lift bevel lock lever above table height with the left hand.
3. Grasp the main handle with the left hand and tilt the saw assembly slightly to the left while rotating the spring-loaded bevel range selector knob with the right hand so the knob's indicator points to "0-45° Right" as on the label.
4. Once in the desired bevel position, hold the saw assembly with right hand and use left hand to fully press down the bevel lock lever below table height.

NOTE: When the saw assembly is tilted back to left past 0°, the bevel control knob will snap back to the default bevel range 1. This is designed to regain the preset bevel stop at the important 0° position.

#### Bevel Range 3 = Max. Bevel Angle to 47° Left or Right

This full-capacity bevel range setting overrides all preset stops and allows for cutting at bevel angles beyond the normal 45° on either side.

#### To operate in Bevel Range 3:

1. Move the left and right sliding fences out to clear saw assembly and relock (see Figure 51).
2. Lift bevel lock lever above table height with the left hand.
3. Grasp the main handle with the left hand and tilt the saw assembly slightly to the left while rotating the spring-loaded bevel range selector knob with the right hand so the knob's indicator points to the red square below "Max. Bevel Angle to 47° Left or Right."
4. Once in needed bevel position, hold saw head by the right hand and use left hand to press down the bevel lock lever below table height.

NOTE: The selector knob will stay in this "override" position. Turn the knob slightly clockwise and it will snap back to bevel range 1 (default position).

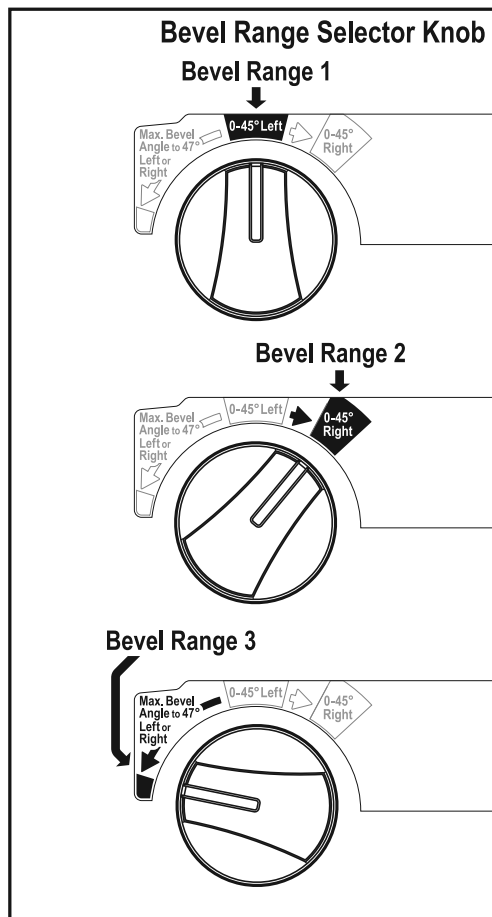


Figure 50

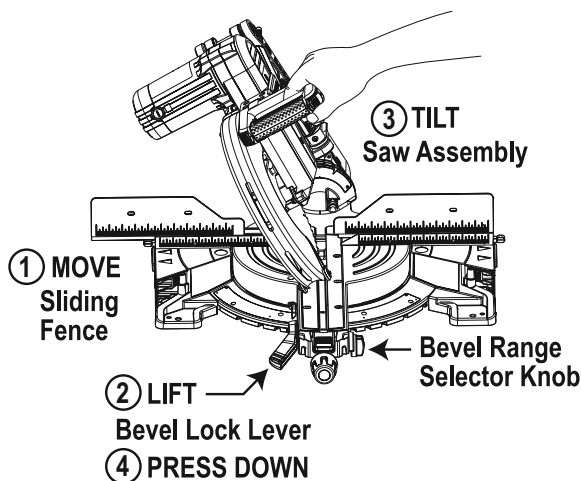


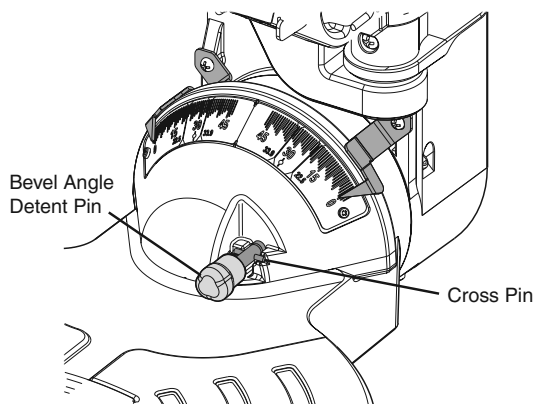
Figure 51

# Saw Operations

## Bevel Cuts

### Bevel Angle Stops and Detents

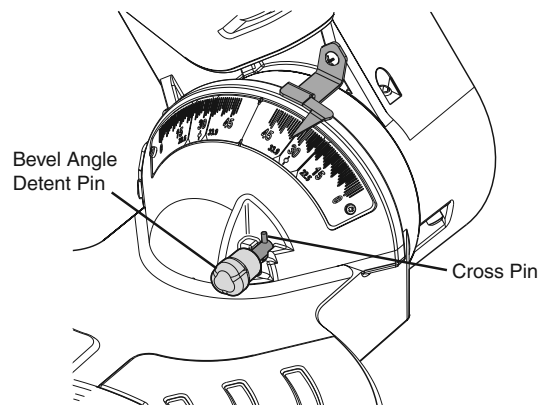
- The saw has bevel angle stops that accurately stop at critical angles: 45° left, 0°, and 45°. It comes factory-set and should not need to be adjusted. However, after extensive use or if the tool has received a hard impact, it may require an adjustment.
- The saw has a bevel angle detent pin which can only be engaged at 33.9° left or right - this is the bevel angle required when cutting 38° "spring angle" crown molding flat on the table. NOTE: If the bevel detent pin automatically engages at 33.9° and prevents tilting the saw to another angle, simply pull it to the front and rotate its cross pin 1/4 turn so it rests in the disengaged position. If pin is sticking in, tilt and rock saw head side to side as you pull on it (see Figure 52).



**Figure 52. Cross Pin Disengaged for Full Range of Bevel Cuts**

### Setting Saw to Make a Bevel Cut

1. Lift up the bevel lock lever to unlock (see item 14 – page 8).
2. Choose the desired bevel range using the bevel range selector knob. NOTE: If in the 0° position and moving to "0-45° Range," it may be necessary to move the head assembly slightly to the left before the selector knob can be turned.
3. Grasp the main handle and tilt the saw head assembly to the desired angle while watching one of the bevel angle pointers – watch the right pointer when tilting to the left or the left pointer when tilting to the right.
4. Continue to hold saw and push down on the bevel lock lever (with your left hand) to lock. Let go of tool.
5. Follow the chop cut or slide cut procedures in this manual.



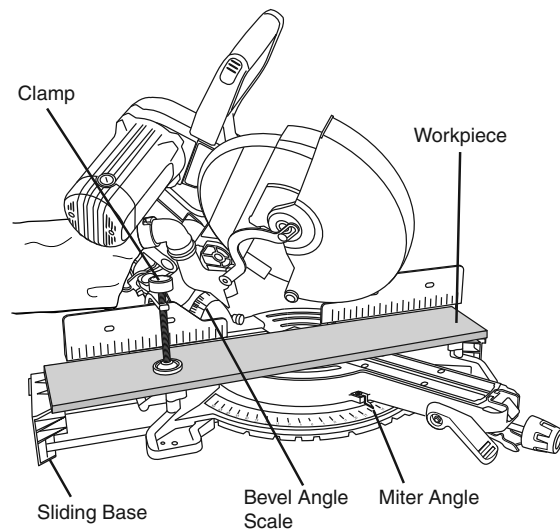
**Figure 53. Cross Pin Engaged for 33.9° Bevel Cut**

# Saw Operations

## Compound Cuts

### What's a Compound Cut – Saw Features

- A “compound cut” is a single cross-cut made with the saw blade preset at two angles combining a miter angle (relative to the vertical fence) with a bevel angle (relative to the horizontal table).
- Miter angles will be with the table rotated away from 0° and within this saw's range from 52° left to 60° right.
- A bevel angle is when the blade is tilted away from 0°. This saw's range is from 47° left to 47° right. NOTE: If the bevel detent pin automatically engages at 31.6° and prevents tilting the saw to another angle, simply pull it to the front and rotate its cross pin 1/4 turn so it rests in the disengaged position. If pin is sticking in, tilt and rock saw head side to side as you pull on it.
- A compound cut can be made as a chop cut or a slide cut.
- Cutting crown molding flat on the table requires compound cuts. See Cutting Crown Molding section on page 45.



**Figure 54. Compound Cut**

# Saw Operations

## Cutting Grooves

The depth stop adjustment is a feature used when cutting grooves in the workpiece.

The depth adjustment is used to limit blade depth to cut grooves.

NOTE: Read and understand all instructions on page 19 in the Adjustments section on "Setting Blade Depth for Non-Through Cuts for Cutting Grooves."

NOTE: For best results, Bosch recommends the use of a table saw with an optional dado blade set for cutting grooves and non-through cuts. In the event this is not available, the feature described below is a convenient alternative.

A groove should be cut as a slide cut.

1. For adjustment of groove depth, pull out depth stop plate and rotate depth stop screw. Rotating the depth stop screw clockwise will raise saw blade and rotating the screw counterclockwise will lower the blade.
2. For minor adjustments, simply rotate the depth stop screw to the desired location.

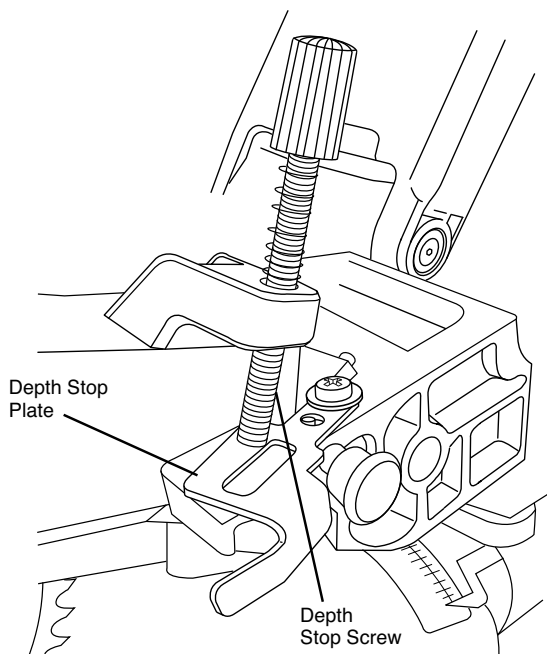


Figure 55. Cutting Grooves

3. Cut the two outside grooves first.

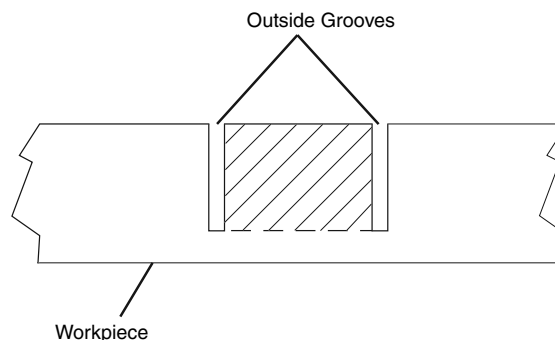


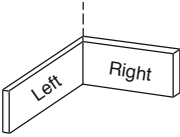
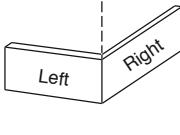
Figure 56. Rough Cut Groove

4. After cutting a groove, shut saw "OFF" and wait for blade to stop.
5. To remove material between cuts, move the workpiece to the right or left. The saw must come to a complete stop before moving workpiece.

# Saw Operations

## Cutting Base Molding

- Base molding can be cut vertical against fence or flat on the table. The maximum size that can be vertical on the fence is 6-1/2", flat on table is 13-1/2".
- Cutting base molding can be done either as a chop cut or a slide cut depending on the size of the workpiece.
- Follow the table for helpful hints on cutting base molding for corners that have 90° angles.

BASE MOLDING CUTTING INSTRUCTIONS					
LOCATION OF MOLDING ON SAW →		Molding in Vertical Position: Back of molding is against the fence		Molding in Horizontal Position: Back of molding is flat on the table	
Bevel Angle →		Bevel = 0°		Bevel = 45°	
Molding Piece Being Cut →		To left of corner	To right of corner	To left of corner	To right of corner
<b>Inside corner of wall</b> 	Miter Angle	Left at 45°	Right at 45°	0°	0°
	Position of molding on saw	Bottom against table	Bottom against table	Top against fence	Bottom against fence
	Finished side	Keep left side of cut	Keep right side of cut	Keep left side of cut	Keep left side of cut
<b>Outside corner of wall</b> 	Miter Angle	Right at 45°	Left at 45°	0°	0°
	Position of molding on saw	Bottom against table	Bottom against table	Bottom against fence	Top against fence
	Finished side	Keep left side of cut	Keep right side of cut	Keep right side of cut	Keep right side of cut

## Cutting Crown Molding

Crown molding cuts must be positioned properly to fit exactly.

There are two ways to cut crown molding: flat on table or angled to table and fence.

Crown molding's "spring angle" is the angle between the back of the molding and the bottom flat surface that fits against the wall.

This miter saw has special miter detents at 31.6° and bevel detents at 33.9°. These detents allow you to easily position most crown molding flat on the table and make precise cuts for 90° corners. NOTE: These detents cannot be used with 45° crown molding. These detents are only for use with crown molding that has a 38° "spring angle."

See also pages 46 & 47 for miter and bevel angle charts for cutting crown molding that has 38° and 45° spring angles. Each chart lists the exact miter and bevel settings required for a wide range of corner angles.

Even though these angles are standards, most rooms do not have angles of exactly 90°; therefore, you will need to fine-tune your settings.

The optional Bosch DAF220K MiterFinder Digital Anglefinder/Protractor measures spring angles and corner angles, then automatically determines the exact miter and bevel settings necessary to make each crown molding cut fit perfectly.

# Saw Operations

## Crown Molding Angled to Table and Fence

The preferred method for cutting crown molding with this saw is with the molding lying flat on the table.

The advantage to cutting molding angled against fence is that no bevel setting is required. Only the miter angle is adjusted.

The maximum crown molding width that can be cut and angled to table and fence is 6-1/2".

When cutting crown molding in this fashion it is recommended to purchase and use the optional Crown Stop Set (see page 55).

### Follow these instructions for cutting crown molding angled to table and fence.

1. Position the molding so the bottom (decorative part, which is installed against the wall) is against the fence.
2. For 90° corner, set the miter angle using chart below. Tighten the miter lock knob.
3. Support crown molding against the fence (see "Body and Hand Position" on page 28.)
4. Follow the procedures for chop or slide cut (see pages 34-35).
5. Wait until blade comes to a complete stop before returning head assembly to the raised position and/or removing workpiece.

NOTE: Always take a test cut using scrap to confirm correct angles.

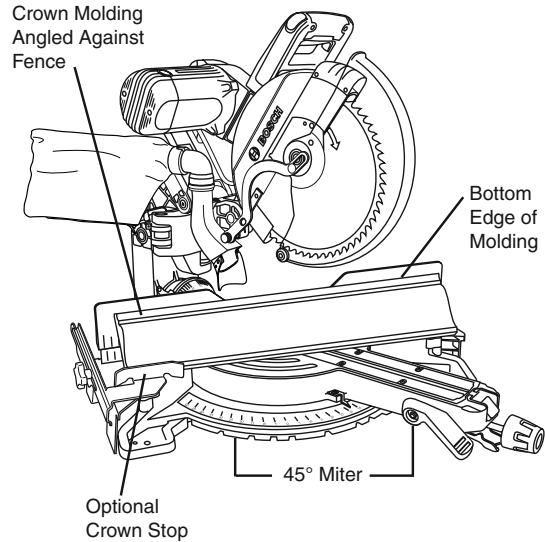
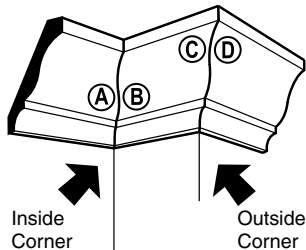
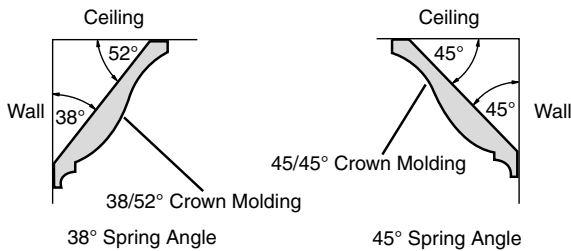


Figure 57. Crown Molding Angled to Table and Fence

### Miter and Bevel Settings for Standard Crown Molding Cuts (When Workpiece Angled Against Fence)

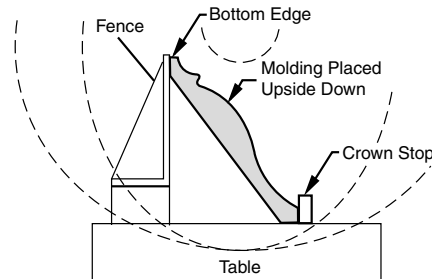
**Assumptions:** Molding is milled consistently. Corner is 90°.

For other corner angles, divide actual measurement by 2.



Refer to Chart

For Any Crown Molding Up to 6"		
Note: Always place bottom edge against fence	Miter (Table) Setting	Bevel (Tilt) Setting
<b>Inside Corner -</b> Left end (A) Use the left end of the cut	45° Right	0° Left
Right end (B) Use the right end of the cut	45° Left	0° Right
<b>Outside Corner -</b> Left end (C) Use the left end of the cut	45° Left	0° Right
Right end (D) Use the right end of the cut	45° Right	0° Left



Cutting - Angled to Table and Fence



# Saw Operations

## Crown Molding Lying Flat on Table

NOTE: Position workpiece with its back flat on the saw table.

Always place top edge of molding against fence (decorative edge is at the bottom of crown molding.)

“Spring angle” refers to angle between wall and crown molding.

Cutting crown molding flat on the table can be done either as a chop cut or a slide cut depending on the width of the workpiece.

Refer to special auxiliary fence for narrow cutoffs when cutting crown flat on table (see page 48).

1. For 90° corner, set the bevel and miter angles using charts below. Tighten the miter lock knob and the bevel lock lever.
2. Position molding on saw table. Clamp workpiece in place using the quick clamp.

**⚠ WARNING** Use clamping position that does not interfere with operation. Before switching “ON,” lower head assembly to make sure clamp clears guard and head assembly.

3. Follow procedures for either chop cut or slide cut (see pages 34-35).
4. Wait until blade comes to a complete stop before returning head assembly to the raised position and/or removing workpiece.

NOTE: Always take a test cut using scrap to confirm correct angles.

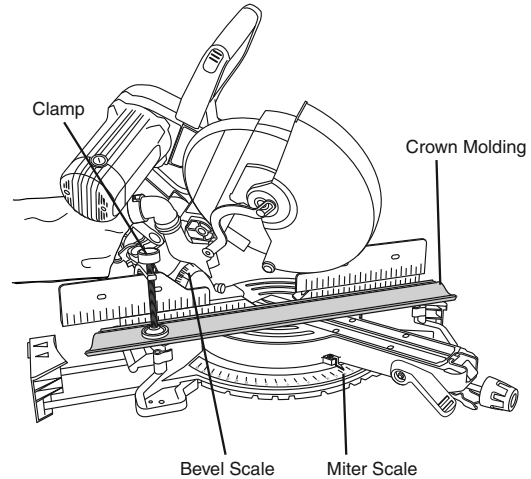
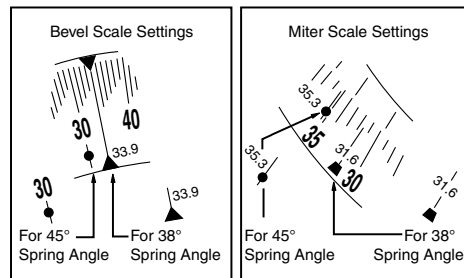


Figure 58. Crown Molding Lying Flat

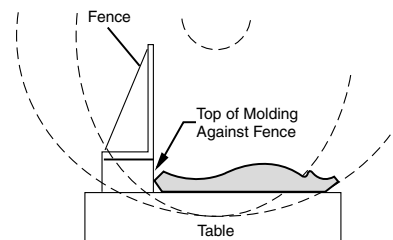
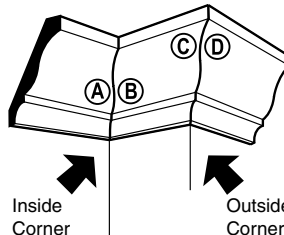
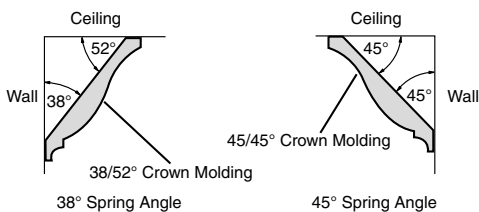


### Miter and Bevel Settings for Standard Crown Molding Cuts

(With Molding Flat on Table) Assumptions: Molding is milled consistently. Corner is exactly 90°.

Molding Spring Angle is 38°		
Note: Always place top edge against fence	Miter (Table) Setting	Bevel (Tilt) Setting
<b>Inside Corner -</b> Left end (A) Use the left end of the cut	31.6° Right	33.9° Left
Right end (B) Use the right end of the cut	31.6° Left	33.9° Right
<b>Outside Corner -</b> Left end (C) Use the left end of the cut	31.6° Left	33.9° Right
Right end (D) Use the right end of the cut	31.6° Right	33.9° Left

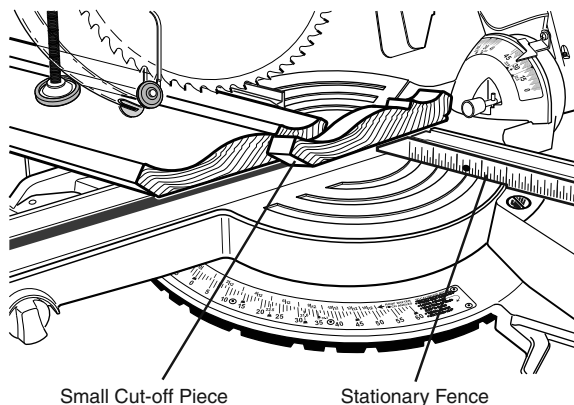
Molding Spring Angle is 45°		
Note: Always place top edge against fence	Miter (Table) Setting	Bevel (Tilt) Setting
<b>Inside Corner -</b> Left end (A) Use the left end of the cut	35.3° Right	30° Left
Right end (B) Use the right end of the cut	35.3° Left	30° Right
<b>Outside Corner -</b> Left end (C) Use the left end of the cut	35.3° Left	30° Right
Right end (D) Use the right end of the cut	35.3° Right	30° Left



# Saw Operations

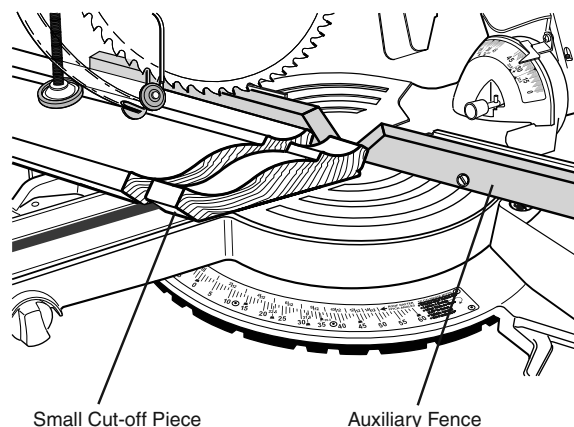
## Crown Molding Auxiliary Fence

**⚠ WARNING** When making a compound cut on a molding lying flat on the table, narrow cut-off pieces (2" or less in width) may be propelled at high speed over the fence and beyond the back of the tool (see Figure 59). Use auxiliary fence as instructed and shown in figures below.



**Figure 59. Cut-off Piece Over Fence**

An auxiliary fence is used to add support to the cut-off workpiece such as large crown molding when cut flat on the table (see Figure 60). It will reduce splintering and movement of the unsupported cut-off piece of wood after the cut is made.



**Figure 60. Cut-off Piece Stopped by Auxiliary Fence**

### Making an Auxiliary Fence:

Required pieces:

Wood Board (described below)

4 – Flat Head Machine Screws – 1/4" diameter; 2-1/2" long

4 – 1/4" Flat Washers

4 – Nuts

1. Cut a nominal 1" x 2" wood board to a length of 26-1/16" long. NOTE: 1 x 2" nominal equals 3/4" x 1-1/2" actual. 3/4" plywood cut to size may be substituted.
2. Drill four holes through the board using a 5/16" diameter drill bit. Countersink the holes deep enough so that the flat head screws will rest below the front work surface – use a 1/2" diameter drill bit (see Figure 61).

Remove the sliding fences from the tool – see page 29.

1. Place the flat head screws through the holes in the auxiliary fence, then the holes in the stationary fence on the tool.
2. Place the washers and nuts over the screw threads and against the stationary fence. Tighten nuts.

### First-Time Use of the Auxiliary Fence:

NOTE: The first time the auxiliary fence is used, it will be cut through by the saw blade – cutting through creates minimal clearance which reduces splintering on the workpiece. Set the miter angle and the bevel angle required before making the first cut. Clamp the workpiece, then make cut – example: compound cutting large crown molding flat on the table (see Figure 58).

# Saw Operations

## Crown Molding Auxiliary Fence

**Auxiliary Fence** - Using an Auxiliary Fence when cutting Crown molding flat on the table will reduce splintering of your workpiece and movement of small cut-off pieces. Remove the saw's sliding fences (see page 29) before attaching the auxiliary fence.

**Build auxiliary fence by following pattern below - Material: 3/4" x 1-1/2" wood.**

**Add 4 holes as dimensioned on pattern -or- Add holes following the next steps:**

- 1) Cut wood to the outside dimensions shown and temporarily attach to saw's stationary fence using two C-clamps.
- 2) Use 1/4" drill bit to drill first through existing holes in the rear of the stationary fence and then through the wood.
- 3) Remove wood, countersink the front of the wood and permanently attach to saw's fence with hardware shown below.

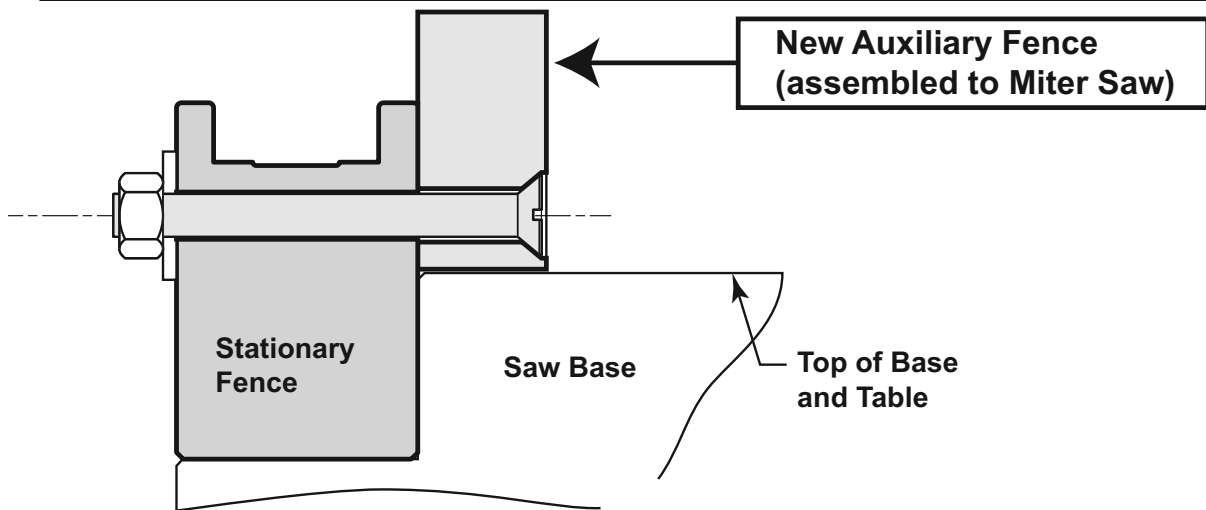
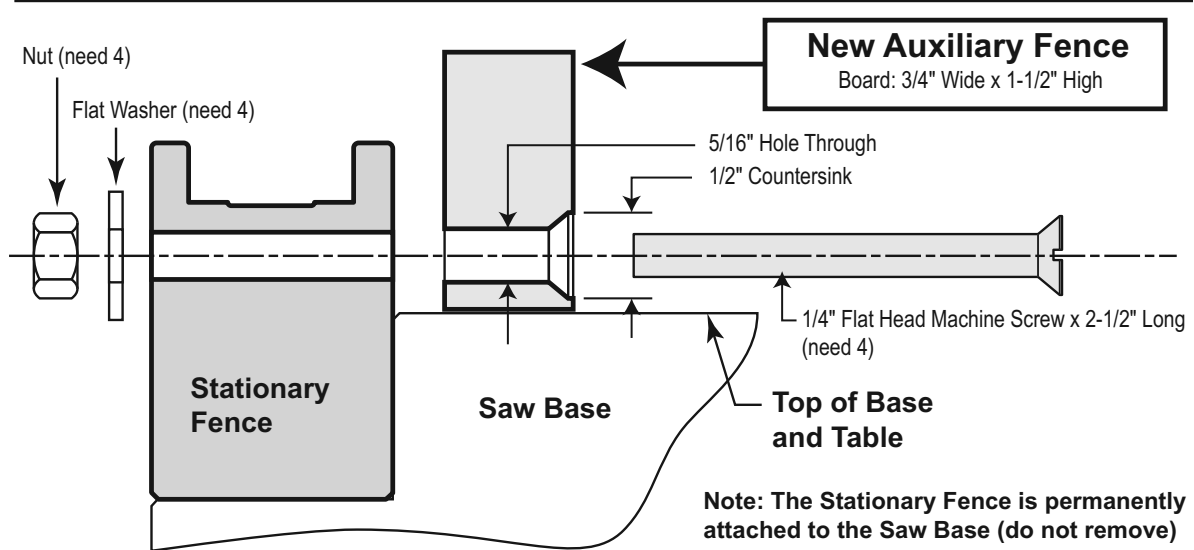
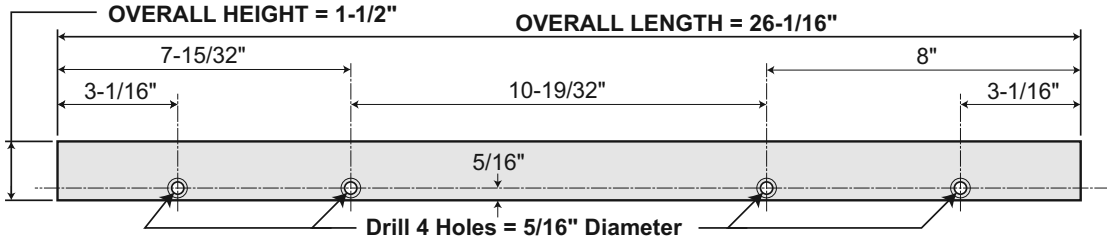


Figure 61  
49.

# Saw Operations

## Special Cuts

Cutting bowed material and round material are only two examples of special cuts.

### Cutting Bowed Material

If workpiece is bowed or warped, clamp it with the outside bowed face toward the fence. Always make certain that there is no gap between the workpiece, fence and table along the line of cut. Bent or warped workpieces can twist or rock and may cause binding on the spinning saw blade while cutting (see Figure 62).

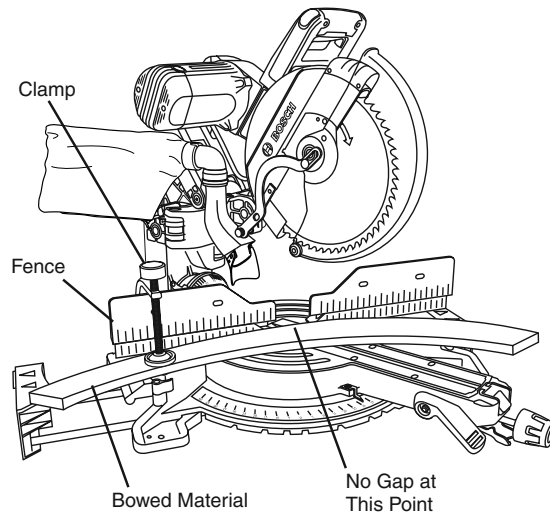


Figure 62. Bowed Material

### Cutting Round or Irregularly Shaped Material

For round material such as dowel rods or tubing, always use a clamp or a fixture designed to clamp the workpiece firmly against the fence and table. Rods have a tendency to roll while being cut, causing the blade to “bite” and pull the work with your hand into the blade (see Figure 63).

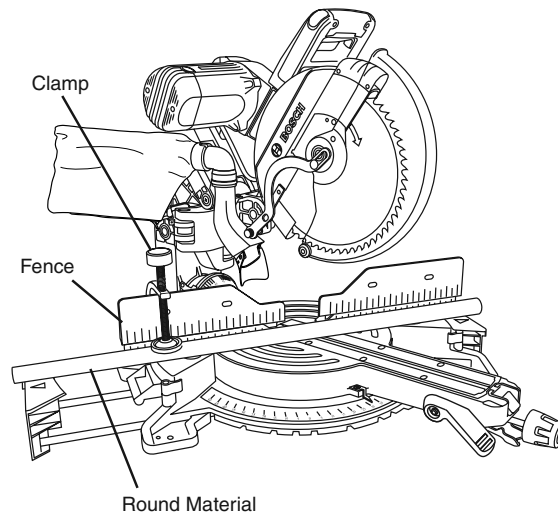


Figure 63. Round Material

# Maintenance and Lubrication

## Service

**⚠ WARNING** Preventive maintenance performed by unauthorized personnel may result in misplacing of internal wires and components which could cause serious hazard. We recommend that all tool service be performed by a Bosch Factory Service Center or Authorized Bosch Service Station.

## Motor Brushes

The brushes and commutator in your tool have been engineered for many hours of dependable service. To maintain peak efficiency of the motor, we recommend every 2-6 months the brushes be examined. Only genuine Bosch replacement brushes specially designed for your tool should be used.

## Motor Brush Replacement

To inspect or replace brushes:

1. Unplug the saw.

**⚠ WARNING** The brush cap is spring-loaded by the brush assembly.

2. Remove the brush cap on the motor using a wide, flat-blade screwdriver.
3. Pull out the brush (see Figure 64). Repeat for the opposite side.

NOTE: If installing the existing brush or brushes, make sure the brush goes in the same way it came out. Otherwise, a break-in period will occur that will reduce motor performance and increase brush wear.

4. Inspect brushes for wear. On the wide, flat side of brush is a wear limit line. If the brush contact face is at or beyond (no line visible) the limit, replace brushes as a set.
5. Install new brush. The two tabs on the brush terminal go in the same hole the carbon part fits into.
6. Tighten the brush cap but do not overtighten.

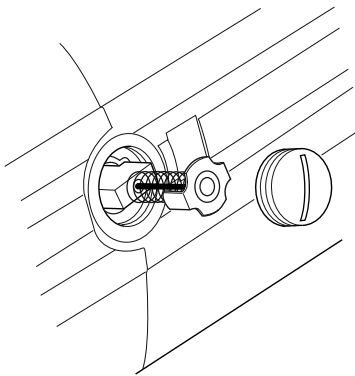


Figure 64. Motor Brush

## Drive Belt

The drive belt is a long life component; however, after extensive use, it may require cleaning or replacement. Dust and debris may enter through the ventilation system and affect the performance of the belt. Periodically, the drive belt should be inspected for excessive wear. If the belt shows signs of drying out, cracking or tearing, it should be replaced. If the belt will not track properly or comes off the pulleys, it should be replaced. **Belt replacement should only be performed by an authorized service center.**

## Cleaning / Inspecting Drive Belt:

1. Unplug the saw.
2. Remove the two belt cover screws using a #2 Phillips screwdriver.

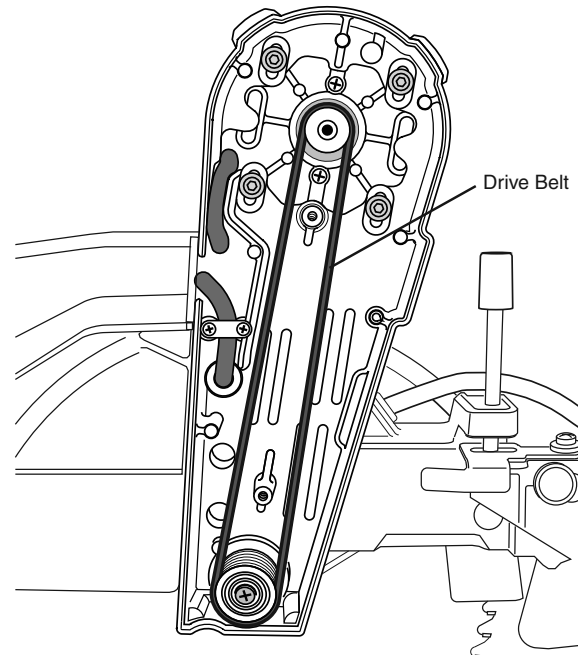


Figure 65. Drive Belt

3. Clean area with a brush or compressed air.
4. Inspect the belt. If dried out, cracked or excessively loose, it may require service and/or replacement.

**⚠ WARNING** To avoid possible injury, do not attempt to replace the drive belt (replacement requires special tools). Take saw to an authorized Bosch service center.

5. Replace belt cover and two cover screws.

# Maintenance and Lubrication

## Cleaning

**⚠ WARNING** To avoid accidents, always disconnect the tool from the power supply before cleaning or performing any maintenance. The tool may be cleaned most effectively with compressed air. Always wear safety goggles when cleaning tools with compressed air.

Ventilation openings and switch levers must be kept clean and free of foreign matter. Do not attempt to clean by inserting pointed objects through openings.

Check regularly to make sure the lower guard and all moving parts are working properly.

Remove accumulated sawdust from working parts by blowing with compressed air or wiping with a damp cloth.

**⚠ WARNING** Certain cleaning agents and solvents damage plastic parts. Some of these are: gasoline, carbon tetrachloride, chlorinated cleaning solvents, ammonia and household detergents that contain ammonia.

## Care of Blades

Blades become dull even from cutting regular lumber. If you find yourself forcing the saw forward to cut instead of just guiding it through the cut, chances are the blade is dull or coated with wood pitch.

When cleaning gum and wood pitch from blade, unplug the saw and remove the blade. Remember, blades are designed to cut, so handle carefully. Wipe the blade with kerosene or similar solvent to remove the gum and pitch. Unless you are experienced in sharpening blades, we recommend you do not try.

## Tool Lubrication

Your Bosch tool has been properly lubricated and is ready to use. It is recommended that tools with gears be regreased with a special gear lubricant at every brush change.

Periodically lubricate moving parts with a silicone, or light oil spray. Do not use grease because it tends to attract and hold sawdust.

## Bearings

All bearings in this tool are lubricated with a sufficient amount of high-grade lubricant for the life of the unit under normal operating conditions. No further lubrication is required.



# Troubleshooting

## Troubleshooting Guide - Electrical

PROBLEM	CAUSE	CORRECTIVE ACTION
Brake does not stop blade in about 5 seconds.	<ol style="list-style-type: none"> <li>1. Brushes not seated or lightly sticking or worn.</li> <li>2. Motor overheated from use of dull blade/too heavy of a blade, not recommended accessory or rapid on/off cycling.</li> <li>3. Blade bolt loose.</li> <li>4. Other.</li> </ol>	<ul style="list-style-type: none"> <li>- Inspect/clean or replace brushes (see Maintenance and Lubrication section).</li> <li>- Use sharp blade.</li> <li>- Use a recommended blade.</li> <li>- Let saw cool down.</li> <li>- Tighten blade bolt.</li> <li>- Authorized service.</li> </ul>
Motor does not start.	<ol style="list-style-type: none"> <li>1. Check that unit is plugged in.</li> <li>2. Power source fuse or time delay fuse.</li> <li>3. Brushes worn.</li> <li>4. Other.</li> </ol>	<ul style="list-style-type: none"> <li>- Plug unit in. Use different outlet.</li> <li>- 15-Amp time delay fuse or circuit breaker.</li> <li>- See Motor Brush Replacement in the Maintenance and Lubrication section.</li> <li>- Authorized service.</li> </ul>
Flash of light from motor endcap when switch is released.	Normal - brake working properly.	-

# Troubleshooting

## Troubleshooting Guide - General

PROBLEM	CAUSE	CORRECTIVE ACTION
Head assembly does not bevel to desired position.	<ol style="list-style-type: none"> <li>1. Bevel detent pin is engaged. and locks bevel angle at 33.9°.</li> <li>2. Bevel range selector knob setting limits movement.</li> </ol>	<ul style="list-style-type: none"> <li>- Pull out 33.9° bevel detent pin, then rotate pin 1/4 turn to keep out.</li> <li>- Change bevel range selector knob position (see page 41).</li> </ul>
Blade hits table.	Misalignment.	- Authorized service.
Angle of cut not accurate.	Angle stops at 0° or 45° need adjustment.	- See Adjustments section (pages 20-25).
Cannot rotate table to change miter angle.	<ol style="list-style-type: none"> <li>1. Miter lock knob is tightened.</li> <li>2. Miter detent lever is engaged with a detent (slot) in detent plate.</li> <li>3. Sawdust accumulation.</li> </ol>	<ul style="list-style-type: none"> <li>- Turn miter lock knob counterclockwise to loosen.</li> <li>- Pull up on miter detent lever to disengage from detent slot (see page 33).</li> <li>- Vacuum or blow out dust around turntable; wear eye protection.</li> </ul>
Head assembly will not fully raise or blade guard will not fully close.	<ol style="list-style-type: none"> <li>1. Head assembly lock pin is engaged.</li> <li>2. Cover plate not tightened after replacing blade.</li> <li>3. Sawdust accumulation.</li> <li>4. Sawdust accumulation.</li> </ol>	<ul style="list-style-type: none"> <li>- Pull out lock pin, allowing head assembly to go up (see page 17).</li> <li>- See Removing and Installing Blades on pages 13-14.</li> <li>- Clean head assembly.</li> <li>- Authorized service.</li> </ul>
Blade binds, jams, burns wood. Rough cuts.	<ol style="list-style-type: none"> <li>1. Improper operation.</li> <li>2. Dull blade.</li> <li>3. Improper blade.</li> <li>4. Bent blade.</li> </ol>	<ul style="list-style-type: none"> <li>- See Saw Operations section.</li> <li>- Replace or sharpen blade.</li> <li>- Replace with 12" diameter blade designed for material being cut.</li> <li>- Replace blade.</li> </ul>
Head assembly slides forward and back when making a chop cut.	Mechanism lock lever is disengaged.	Pull up on mechanism lock lever tab to engage (see page 18).
Bevel angle is not securely held when bevel lock lever is pushed.	Bevel lock lever needs tension adjustment.	Increase bevel lock lever force by adjusting tension nut (see page 25).
Glide mechanism is difficult to move forward and back.	Glide movement controller is set too tight.	Loosen two screws on the movement controller (see page 17).

# Troubleshooting

## Troubleshooting Guide - General

PROBLEM	CAUSE	CORRECTIVE ACTION
Tool vibrates or shakes.	1. Saw blade not round. 2. Saw blade damaged. 3. Saw blade loose. 4. Other	- Replace blade. - Replace blade. - Check that blade is properly seated on the inner washer. See Removing and Installing Blades on pages 13-14. - Authorized service.
Head assembly does not slide freely when attempting a slide cut.	Mechanism lock lever is engaged.	Push down on mechanism lock lever to disengage (see page 18).
Blade does not cut completely through workpiece.	1. Depth stop plate is pulled out for non-through cuts. 2. Replacement blade is less than 12" diameter.	- Push depth stop plate inward to set for full-depth cuts (see page 19). - Change to a blade that is fully 12" diameter.
Saw blade or lower guard cuts or contacts sliding fence when saw is set for bevel cuts.	Sliding fence is not moved out from path of saw blade before making bevel cut.	Move sliding fence to be clear of lower guard and saw blade; perform a "dry cut" to check for clearances before making bevel cuts (see page 41).
Bevel angle is not securely held when bevel lock lever is locked.	Bevel lock lever needs tension adjustment.	Increase bevel lock lever tension by adjusting lock nut (see page 25).

## Accessories

**DAF220K MiterFinder™ Digital Angle finder/Compound Cut Calculator/Protractor/Level** – Gives you the information needed to position cuts so that they fit together precisely even if the room is out of square.

**2610009331 Crown Stop Set** – Correctly hold crown molding in an inclined position against fence. Set molding for simple vertical cutting – no compound cutting required.

**T3B TracRac™ Portable Stand with Wheels**  
**T4B Gravity-Rise Wheeled Miter Saw Stand**