# **KOBALT NEXT GENERATION** OF TOUGH TOOLS<sup>™</sup>



## **10 IN. SLIDING COMPOUND MITER SAW** WITH LASER GUIDE

MODEL #SM2507LW

Francais P. 51 Español P. 101

US

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Serial Number

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#### TABLE OF CONTENTS

Product Specifications	2
Package Contents	3
Safety Information	4
Preparation	10
Assembly Instructions	12
Adjustment Instructions	14
Operating Instructions	25
Crown Moulding Chart	37
Care and Maintenance	38
Troubleshooting	40
Replacement Parts List and Exploded Views	41
Warranty	50

#### **PRODUCT SPECIFICATIONS**

MOTOR		CUTTING CAPACITY		
Power Source	15A, 120V A/C, 60 Hz	Crosscut	3-1/2 in. x 12 in.	
Arbor Shaft Size	5/8 in.	Miter 45° Right & Left	3-1/2 in. x 8 in.	
Speed (No load)	4800 RPM	Bevel 45° Left	1-5/8 in. x 12 in.	
Electric Brake	Yes	45° Miter & 45° Bevel	1-5/8 in. x 8 in.	
Double Insulated	Yes	Crown Moulding Nested	5-3/4 in.	
BLADE		Base Moulding Against Fence 3-1/2 in.		
Diameter	10 in.	MITER/BEVEL POSITIVE STOP ANGLES		
Arbor	5/8 in.	Miter Detent Stops 0°, 15°, 22.5°, 31 R&L		
		Bevel Positive Stops	0°, 33.9°, 45° L	



#### PACKAGE CONTENTS

#### UNPACKING YOUR MITER SAW

#### 

To avoid injury from unexpected starting or electrical shock, do not plug the power cord into a source of power during unpacking and assembly. The cord must remain unplugged whenever you are adjusting/assembling the saw.

1. Remove the miter saw from the carton.

**IMPORTANT:** Only lift the saw by the built-in carry handles located at the top and rear of the saw.

- 2. Place the saw on a secure, stationary work surface.
- 3. Separate all parts from the packing material. Check each one with the illustration below to make certain all items are accounted for before discarding any packing material.

#### 

If any part is missing or damaged, do not attempt to assemble the miter saw or plug in the power cord until the missing or damaged part is correctly replaced. To avoid electric shock, use only identical replacement parts when servicing double-insulated tools.





PARTS	DESCRIPTION	QUANTITY
A	Miter saw	1
В	Hold-down clamp	1
С	Dust bag	1
D	Blade wrench	1
E	Miter handle	1
F	3 mm hex wrench	1

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## **SAFETY INFORMATION**

#### **PROPOSITION 65 WARNING**

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

- Lead from lead-based paints,
- Crystalline silica from bricks 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 chemical: work in a well ventilated area and work with approved safety equipment, such as dust masks that are specially designed to filter out microscopic particles.

Handling the power cord on this product may expose you to chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. Wash hands after handling.

## 

- Use only the accessories recommended for this miter saw. Follow instructions that accompany the accessories. Use of improper accessories may cause injury.
- The use of any cutting tool except 10 in. saw blades is prohibited. Do not use accessories such as shaper cutters or dado sets. Ferrous metal cutting, the use of abrasive wheels and the cutting of masonry products are prohibited.
- Do not attempt to modify this tool or create accessories not recommended for use with this tool. Any such alteration or modification is misuse and could result in a hazardous condition leading to possible serious injury.

## 

To avoid the risk of personal injury, do not modify this power tool or use accessories not recommended to fit your tool.

### **WARNING**

Read warnings and conditions on your CARBIDE TIPPED SAW BLADE.

- Do not operate the saw without the proper saw blade guard in place.
- Carbide is a very hard but brittle material. Care should be taken while mounting, using and storing carbide tipped blades to prevent accidental damage.
- Slight shocks, such as striking the tip, can seriously damage the blade. Foreign objects in the workpiece, such as wire or nails, can also cause tips to crack or break off.
- Before using, always visually examine the blade and tips for bent teeth, cracks, breakage, missing or loose tips, or other damage.
- Do not use if damage is suspected. Failure to heed safety instructions and warnings can result in serious bodily injury or loss of eyesight.



#### SAFETY INFORMATION

#### POWER TOOL SAFETY INFORMATION

#### **WARNING**

Please read and understand this entire manual before attempting to assemble, operate or install the product. These safety instructions are not meant to cover every possible condition that could occur.

#### **GENERAL SAFETY INSTRUCTIONS**

- LEARN the tool's application, limitations and possible hazards.
- KEEP GUARDS IN PLACE and in working order.
- REMOVE ADJUSTING KEYS AND WRENCHES. Always check to see that keys and adjusting wrenches are removed from the tool and properly stored before turning it ON.
- **KEEP WORK AREA CLEAN.** Cluttered areas and benches invite accidents.
- DO NOT USE IN DANGEROUS ENVIRONMENTS. Do not use power tools in damp locations or expose them to rain or snow. Keep work area well lit.
- KEEP CHILDREN AWAY. All visitors and bystanders should be kept at a safe distance from work area.
- MAKE WORKSHOP CHILDPROOF with padlocks, master switches or by removing starter kevs.
- DO NOT FORCE THE TOOL. It will do the job better and is safer if used at the rate for which it was designed.
- USE THE RIGHT TOOL. Do not force the tool or an attachment to do a job for which it was designed.
- **USE PROPER EXTENSION CORDS.** Make sure your extension cord is in good condition. When using an extension cord, be sure to use one heavy enough to carry the current your product will draw. An undersized cord will result in a drop in line voltage and in loss of power that will cause the tool to overheat. The table on page 9 shows the correct size to use depending on cord length and nameplate ampere rating.
- WEAR PROPER APPAREL. Do not wear loose clothing, gloves, neckties, rings, bracelets or other jewelry that may get caught in moving parts. Non-slip footwear is recommended. Contain long hair.
- ALWAYS WEAR EYE PROTECTION. Any power tool can throw foreign objects into the eyes and could cause permanent eye damage. ALWAYS wear safety goggles (not glasses) that comply with ANSI Safety standard Z87.1. Everyday eyeglasses have only impactresistant lenses. They ARE NOT safety glasses. NOTE: Wearing glasses or goggles not in compliance with ANSI Z87.1 could lead to serious injury.
- WEAR A FACE MASK OR DUST MASK AND WEAR HEARING PROTECTION. Operating power tools produces sawdust. Use a dust mask in dusty work conditions. Wear hearing protection during extended periods of operation.
- SECURE WORK. Use clamps or a vise to hold work when practical. It is safer than using your hand and it frees both hands to operate the tool.
- **DISCONNECT TOOLS FROM POWER SOURCE** before servicing and when changing accessories, such as blades, bits and cutters.
- REDUCE THE RISK OF UNINTENTIONAL STARTING. Make sure switch is in the OFF position before plugging in the tool.
- USE RECOMMENDED ACCESSORIES. Consult this Operator's Manual for recommended accessories. The use of improper accessories may lead to injury to yourself or others.
- NEVER STAND ON THE TOOL. Serious injury could occur if the tool is tipped or if the cutting tool is unintentionally contacted.

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- **CHECK FOR DAMAGED PARTS.** Check the tool for alignment of moving parts, binding of moving parts, breakage of parts or mounting and any other conditions that may affect its operation. Damaged parts should be properly repaired or replaced.
- **NEVER LEAVE THE TOOL RUNNING UNATTENDED. TURN THE POWER OFF.** Do not walk away from a running tool until the blade comes to a complete stop. Unplug the unit.
- DO NOT OVERREACH. Keep proper footing and balance at all times.
- **MAINTAIN TOOLS WITH CARE.** Keep tools sharp and clean for best and safest performance. Follow instructions for lubricating and changing accessories.
- **DIRECTION OF FEED.** Feed work into a blade or cutter against the direction of rotation of the blade or cutter.

**CAUTION** Dust generated from certain materials can be hazardous to your health. Always operate the saw in a well-ventilated area and provide for proper dust removal.

**WARNING** People with electronic devices, such as pacemakers, should consult their physician(s) before using this product. Operation of electrical equipment in close proximity to a heart pacemaker could cause interference or failure of the pacemaker.

#### COMPOUND MITER SAW SAFETY

- USE ONLY CROSS-CUTTING OR COMBINATION SAW BLADES. IMPORTANT: Improper blades will touch and deflect the blade guard and cause possible injury to the operator.
- **DO NOT** operate the miter saw until it is completely assembled and installed according to these instructions.
- **IF YOU ARE NOT** thoroughly familiar with the operation of miter saw, seek guidance from your supervisor, instructor or other qualified person.
- **ALWAYS** hold the work firmly against the fence and table. DO NOT perform any operation free hand. Use clamp when ever possible.
- **KEEP HANDS** out of the path of the saw blade. If the workpiece you are cutting would cause your hands to be within "no-hands zone" area of the saw blade, the workpiece should be clamped in place before making the cut.
- **MAKE SURE** the blade is sharp, runs freely and is free of vibration.
- ALLOW the motor to come up to full speed before starting a cut.
- KEEP THE MOTOR AIR SLOTS CLEAN and free of chips or dust.
- ALWAYS MAKE SURE all handles are tight before cutting, even if the table is positioned in one of the positive stops.
- **MAKE SURE** both the blade and the collar are clean and the arbor bolt is tightened securely.
- USE only blade collars specified for your saw.
- **NEVER** use blades larger than 10 in. diameter.
- **NEVER** apply lubricants to the blade when it is running.
- **ALWAYS** check the blade for cracks or damage before operation. Replace a cracked or damaged blade immediately.
- **NEVER** use blades recommended for operation at less than 4800 RPM.
- ALWAYS keep the blade guards in place and use at all times.
- **NEVER** reach around the saw blade.
- MAKE SURE the blade is not in contact with the workpiece before the switch is turned ON.
- **IMPORTANT:** After completing the cut, release the trigger switch and wait for the blade to stop before returning the saw to the raised position.
- **MAKE SURE** the blade has come to a complete stop before removing or securing the workpiece, changing the workpiece angle or changing the angle of the blade.
- **NEVER** cut metals or masonry products with this tool. This miter saw is designed for use on wood and wood-like products.

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- **TO PREVENT** severe cuts or injury, clamp all workpieces that can cause your arms, hands or fingers to move within 7-1/2 in. of the saw blade.
- **PROVIDE** adequate support to the sides of the saw table for long workpieces.
- **NEVER** use the miter saw in an area with flammable liquids or gases.
- **NEVER** use solvents to clean plastic parts. Solvents could possibly dissolve or otherwise damage the material.
- SHUT OFF the power before servicing or adjusting the tool.
- **DISCONNECT** the saw from the power source and clean the machine when finished using.
- **SHOULD** any part of your miter saw become missing, damaged, fail in any way or any electrical component fail to perform properly, shut off the switch and remove the plug from the power supply outlet. Replace missing, damaged or failed parts before resuming operation.
- Because of the downward cutting motion, your safety requires that you stay very alert to keeping hands and fingers away from the path that the blade travels.
- Be sure all guards are in place and working. If a guard seems slow to return to its normal position or "hangs up," adjust or repair it immediately. Be alert at all times especially during repetitive, monotonous operations. Don't be lulled into carelessness due to a false sense of security. Blades are extremely unforgiving. Clean the lower guard frequently to help visibility and movement. Unplug before adjustment or cleaning.
- Abrasive cut-off wheels should not be used on miter saws. Miter saw guards are not appropriate for abrasive cut-off wheels.
- To avoid loss of control or placing hands in the path of the blade, hold or clamp all material securely against the fence when cutting. Do not perform operations freehand.
- Support long material at the same height as the saw table.
- Never place your hands or fingers in the path of the blade, or reach in back of the fence. It's hazardous to do so. Do not cross arms or hands in front of blade to secure workpiece. Use clamps if necessary. Saw blades coast after being turned off, to avoid contact with a coasting blade do not reach into cutting areas until the blade comes to a full stop.
- After completing a cut, release the trigger switch and allow the blade to come to a complete stop, then raise the saw blade from the workpiece.
- Miter saws have spring loaded saw heads to return the saw head to its up position. Adjust, repair, or replace the spring mechanism if the saw head does not automatically return to its up position when released.
- Hold or clamp the work firmly against the fence on the sawed end.
- Lock the miter saw and blades in the down position during transport or when not in use.
- **DRY RUN** It is important to know where the blade will intersect with the workpiece during cutting operations. Always perform a simulated cutting sequence with the power tool switched OFF to gain an understanding of the projected path of the saw blade. At some extreme angles, the right or left side fence might have to be removed to ensure proper clearance prior to making the cut.

## 

Additional warnings are listed throughout this manual. Please review all before operating this power tool.



### **SAFETY INFORMATION**

#### ELECTRICAL SPECIFICATIONS AND SAFETY

#### **A** CAUTION: POWER SUPPLY AND MOTOR

The AC motor used in this saw is a universal, nonreversible type. See "MOTOR" in the "PRODUCT SPECIFICATIONS" section on page 2.

To avoid electrical hazards, fire hazards or damage to the tool, use proper circuit protection. Your saw is wired at the factory for 120V operation. Connect to a 120V, 15A circuit and use a 15A time-delay fuse or circuit breaker. If power cord is worn or cut or damaged in any way, have it replaced immediately to avoid shock or fire.

#### DOUBLE INSULATED

This power tool is double insulated to provide a double thickness of insulation between you and the tool's electrical system. All exposed metal parts are isolated from the internal metal motor components with protective insulation.

**REPLACEMENT PARTS:** When servicing, use only identical replacement parts list. Refer to the replacement parts list on pages 41 - 48.

#### POLARIZED PLUGS:

To reduce the risk of electrical shock, this saw has a polarized plug (one blade is wider than the other). This plug (illustrated at right) 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. Do not change the plug in any way.



## 

Double insulation does not take the place of normal safety precautions when operating this tool. To avoid electrocution:

- Use only identical replacement parts when servicing a tool with double insulation. Servicing should be performed by a qualified technician.
- Do not use power tools in wet or damp locations or expose them to rain or snow.

#### MOTOR SAFETY PROTECTION

## 

To avoid motor damage, the motor should be blown out or vacuumed frequently to keep sawdust from interfering with motor ventilation.

- **CONNECT** this saw to a 120V, 15A circuit with a 15A time-delay fuse or circuit breaker. Using the wrong size fuse can damage the motor.
- If the motor will not start, release the trigger switch immediately. **UNPLUG THE SAW**. Check the saw blade to make sure it turns freely. If the blade is free, try to start the saw again. If the motor still does not start, refer to **TROUBLESHOOTING**.
- If the tool suddenly stalls while cutting wood, release the trigger switch, unplug the tool and free the blade from the wood. The saw may now be started and the cut finished.
- FUSES may "blow" or circuit breakers may trip frequently if:



- **MOTOR** is overloaded overloading can occur if you feed too rapidly or make too many starts/stops in a short time.
- LINE VOLTAGE is more than 10% above or below the nameplate voltage rating. For heavy loads, the voltage at motor terminals must equal the voltage specified on the nameplate.
- **IMPROPER** or dull saw blades are used.

#### **GUIDELINES FOR EXTENSION CORDS**

When using an extension cord, be sure to use one heavy enough to carry the current your product will draw. An undersized cord will cause a drop in line voltage, resulting in loss of power and overheating. The table below shows the correct size to use depending on cord length and nameplate ampere rating. If in doubt, use the next heavier gauge. The smaller the gauge number, the heavier the cord.

MINIMUM GAUGE FOR EXTENSION CORDS (AWG)					
	(When using 120 volts only)				
Ampere Rating		Total length of Cord			Cord
More Than	Not More Than	25 ft.	50 ft.	100 ft.	150 ft.
0	6	18	16	16	14
6	10	18	16	14	12
10	12	16	16	14	12
12	16	14	12	Not Rec	ommended

Be sure your extension cord is properly wired and in good condition. Always replace a damaged extension cord or have it repaired by a qualified person before using it. Protect your extension cords from sharp objects, excessive heat and damp or wet areas.

Use a separate electrical circuit for your tools. This circuit must not be less than #12 wire and should be protected with a 15A time-delay fuse. Before connecting the tool to the extension cord, make sure the saw switch is in the off position. The electric circuit should be rated the same voltage as is stamped on the motor nameplate. Running at a lower voltage will damage the motor.

## 

In all cases make certain the receptacle in question is properly grounded. If you are not sure, have a certified electrician check the receptacle.



#### PREPARATION

Before beginning assembly or operation of the product, make sure all parts are present. Compare parts with package contents list and diagram on page 3. If any part is missing or damaged, do not attempt to assemble, install or operate the product.

#### Estimated Assembly Time: 10 minutes

Tools Required for Assembly (included): Blade Wrench, 3 mm Hex Wrench

Tools Required for Assembly (not included): Adjustable Wrench, 10 mm Hex Wrench, Combination Square, Phillips Screwdriver



#### KNOW YOUR MITER SAW



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#### ASSEMBLY INSTRUCTIONS

#### 

To avoid injury, do not connect this miter saw to a power source until it is completely assembled and adjusted and you have read and understood the operator's manual.

#### **INSTALLING THE MITER HANDLE (FIG. 1)**

• Thread the miter handle (E) into the hole located at the front of the miter saw (A).



**UNLOCKING THE SLIDE CARRIAGE (FIG. 2)** After removing the saw from the carton, loosen the slide carriage lock knob (1). When transporting or storing the miter saw, the slide carriage should always be locked in position. The slide carriage lock knob (1) is located on the right side of the slide carriage.



#### SAW BLADE WRENCH (FIG. 3)

 For convenient storage and prevention of loss, there is a slot in the rear of the switch handle for storing the blade wrench (D) when not in use.





## INSTALLING THE DUST BAG ASSEMBLY (FIG. 4)

 Install the dust bag assembly (C) onto the exhaust port on the miter saw (A). Fit the connecting tube of dust bag assembly and the exhaust port together.

**NOTE:** To empty the dust bag, pull out the dust bag assembly from exhaust port. Open zipper on underside of bag and empty into waste container.

**IMPORTANT:** Check frequently and empty bag before it gets full.

### 

Do not use this saw to cut and/or sand metals. The hot chips or sparks may ignite sawdust from the bag material.



## INSTALLING THE HOLD-DOWN CLAMP (FIG. 5)

**NOTE:** There are four mounting holes for the hold-down clamp. These are located just behind the fence on the left and right side of the base and on the front of the base.

• Place the hold-down clamp in the desired mounting hole.





## REMOVING AND INSTALLING THE TABLE INSERTS (FIG. 6)

**NOTE:** The miter saw comes with the table inserts already installed. These instructions are for replacing or adjusting either insert side.

#### To avoid injury:

- Always unplug the saw to avoid accidental starting. Remove all small pieces of material from the table cavity before performing any cuts. The table insert may be removed for this purpose, but always reattach the table insert prior to performing a cutting operation.
- Do not start the sliding compound miter saw without checking for interference between the blade and table insert. Damage could result to the blade, table insert or turntable if a blade strike occurs during the cutting operation.
- To remove, loosen and remove the six screws (1) on the table insert (2) with a Phillips screwdriver and remove the inserts.
- To install, reposition the left and right side inserts on either side of the cut line, replace the six screws and tighten.
- Check for blade clearance by moving the slide carriage through the full motion of the blade in the table slot. If neither side of the insert hits the saw blade, loosen the three screws for that side and adjust. Tighten the screws and check again for blade clearance.

## 

Also check all bevel angles before use.





#### MOUNTING THE MITER SAW (FIG. 7, 8, 9)

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To avoid injury from unexpected saw movement:

- Disconnect the power cord from the outlet and lock the cutting head in the lower position using the stop latch.
- Lock the slide carriage in place by tightening the slide carriage lock knob.
- To avoid back injury, lift the saw by using the designated carrying handles located on the top of the machine. Bend with your knees, not your back.
- Never carry the miter saw by the power cord or by the switch handle. Carrying the tool by the power cord could cause damage to the insulation or the wire connections resulting in electric shock or fire.
- To avoid injury from flying debris, do not allow visitors to stand near the saw during any cutting operations.

#### Mounting instructions:

• For stationary use, place the saw in the desired location, directly on a workbench where there is room for handling and proper support of the workpiece. The base of the saw has eight mounting holes (10) (Fig.7), four 1/4 in. holes and four 3/8 in. holes. Select the proper mounting holes based on the size of bolts used. Bolt the base of the miter saw (1) to the work surface (5), using the recommended fastening method as shown in Fig. 8.

**NOTE:** Mounting hardware is not included with this tool. Bolts, nuts, washers and screws must be purchased separately.

• For portable use, place the saw on a 3/4 in. thick piece of plywood. Bolt the base of the miter saw securely to the plywood using the mounting holes (10) (Fig. 7) on the base. Use C-clamps to clamp this mounting board to a stable work surface at the worksite (Fig. 9).

**NOTE:** If a miter saw stand is used, please follow all instructions shown in that product's instructions for proper mounting.









#### REMOVING AND INSTALLING THE BLADE

## 

Only use a 10 in. diameter blade. To avoid injury from an accidental start, make sure the switch is in the OFF position and the plug is not connected to the power source outlet.

#### **REMOVING THE BLADE**

(FIG. 10, 11, 12)

- Unplug the saw from the outlet.
- Allow the miter saw cutting head to rise to the upright position. Raise the lower blade guard (1) to the up position.
- Loosen the cover plate screw (2) with a Phillips screwdriver.

**NOTE:** Do not remove this screw.

- Rotate the cover plate (3) upward to expose the arbor bolt (4).
- Place the blade wrench over the arbor bolt.
- Locate the arbor lock button (5) on the front of motor, below the miter saw switch handle (Fig. 12).
- Press the arbor lock button, holding it in firmly while turning the blade wrench clockwise. The arbor lock will engage after turning the wrench. Continue to hold the arbor lock button to keep it engaged while turning the wrench clockwise to loosen the arbor bolt.
- Remove the arbor bolt (6), the blade collar (7) and the blade (8). Do not remove the inner blade collar (Fig. 12).

**NOTE:** Pay attention to the pieces removed, noting their position and direction they face. Wipe the blade collars clean of any sawdust before installing a new blade.





#### INSTALLING THE BLADE (FIG. 10, 11, 12)

Unplug the miter saw before changing/installing the blade.

- Install a 10 in. blade with a 5/8 in. arbor, making sure the rotation arrow on the blade matches the clockwise rotation arrow on the upper guard.
- Place the blade collar (7) against the blade and on the arbor. Thread the arbor bolt (6) onto the arbor (Fig. 12) in a counterclockwise direction.

**IMPORTANT:** Make sure the flats of the blade collars are engaged with the flats on the arbor shaft. Also, the flat side of the blade collar must be placed against the blade.

- Place the blade wrench on the arbor bolt.
- Press the arbor lock button (5), holding it in firmly while turning the blade counterclockwise. When arbor lock engages, continue to press it in while tightening the arbor bolt securely (Fig. 11).
- Rotate the cover plate (3) back to its original position until the slot in the cover plate engages with the cover plate screw (2). While holding the lower blade guard, tighten the screw with a Phillips screwdriver (Fig.10).
   NOTE: The lower blade guard must be raised to the upright position to access the cover plate screw.
- Lower the blade guard (1) and verify that the operation of the guard does not bind or stick (Fig. 10).
- Be sure the arbor lock is released so the blade turns freely before operating the saw.

## 

- To avoid injury, never use the saw without the cover plate securely in place. It keeps the arbor bolt from falling out if it accidentally loosens and helps prevent the spinning blade from coming off the saw.
- Make sure the collars are clean and properly arranged. Lower the blade into the lower table and check for any contact with the metal base or the miter table.
- To avoid injury from an accidental start, make sure the switch is in the OFF position and the plug is not connected to the power source outlet.
- Never cut metals or masonry products with this tool. This miter saw is designed for use on wood and wood-like products only.





## UNLOCKING AND LOCKING THE CUTTING HEAD (FIG. 13)

#### Unlocking the cutting head:

- To raise the cutter head from its storage/ transport position, push down slightly on the switch handle (1).
- Pull out the stop latch knob (2).
- Allow the cutting head to rise to the up position.

#### Locking the cutting head:

When transporting or storing the miter saw, the cutting head should always be locked in the down position.

- Push the cutting head down to its lowest position.
- Push the stop latch knob (2) into the locking hole.

### 

To avoid injury and damage to the saw, transport and store the miter saw with the cutting head locked in the down position. Never use the stop latch to hold the cutting head in a down position for cutting operations.

**IMPORTANT:** To avoid damage, never carry the miter saw by the switch handle, the cutting arm or the miter table handle. ALWAYS use the designated carrying handles.

## BEVEL STOP ADJUSTMENT (FIG. 14, 15, 16)

To avoid injury from an accidental start, make sure the switch is in the OFF position and the plug is not connected to the power source outlet.

#### 90° (0°) Bevel Adjustment (Fig. 14):

- Loosen bevel lock handle (1) and tilt the cutting arm completely to the right. Tighten the bevel lock handle.
- Place a combination square (2) on the miter table with the ruler against the table and the heel of the square against the saw blade.
- If the blade is not 90° square with the miter table (5), loosen the bevel lock handle (1), tilt the cutting head to the left, loosen the jamb nut (4) and turn the bevel angle adjustment bolt (3) in or out with a 10 mm wrench until the blade is square with the table.
- Tilt the cutting arm back to the right at 90°(0°) bevel and recheck for alignment.
- Repeat steps 1 through 4 if further adjustment is needed.
- Tighten bevel lock handle and jamb nut (4) when alignment is achieved.







#### 90° Bevel Pointer Adjustment (Fig. 15):

- When the blade is exactly 90° to the table, loosen the bevel indicator screw (1) using a Phillips screwdriver.
- Adjust bevel indicator (2) to the "0" mark on the bevel scale and retighten the screw.

#### 

To avoid injury from an accidental start, make sure the switch is in the OFF position and the plug is not connected to the power source outlet.



#### 45° Bevel Adjustment (Fig. 16) :

- Loosen the bevel lock handle (1) and tilt the cutting head completely to the left.
- Using a combination square, check to see if the blade angle is 45° to the table.
- If the blade is not at 45° to the miter table, tilt the cutting arm to the right, loosen the jamb nut (2) and turn the bevel angle adjustment bolt (3) in or out with a 10 mm wrench accordingly.
- Tilt the cutting arm to the left to 45° bevel and recheck for alignment.
- Repeat steps 1 through 4 until the blade is at 45° to the miter table.
- Tighten bevel lock handle (1) and jamb nut (2) when alignment is achieved.

#### 33.9° Bevel Adjustment (Fig. 16) :

- Push the bevel detent pin (4) in toward the front of the unit.
- Unlock the bevel lock handle and tilt the cutting arm to the crown molding positive stop at 33.9°.
- Using a combination square, check to see if the blade angle is 33.9° to the table.
- If the blade is not at 33.9° to the miter table, loosen jamb nut (5) then turn the bevel angle adjustment bolt (6) in or out with a 10 mm wrench until the blade is at 33.9° to the miter table.
- Secure the jamb nut (5) into position after alignment is achieved.



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#### MITER SCALE (FIG. 17)

The sliding compound miter saw scale can be easily read, showing miter angles from 0° to 50° left and right. The most common angle settings have positive stops at 0°,15°, 22.5° , 31.6°, 45° left and right and 60° right only. These positive stops position the blade at the desired angle quickly and accurately. Follow the process below for quickest and most accurate adjustments.

#### To Adjust Miter Angles:

- Unlock the miter table by turning the miter handle (1) counterclockwise.
- Move the turntable while lifting up on the positive stop locking lever (2) to align the indicator (3) to the desired degree measurement.
- If the desired angle is one of the nine positive stops, release the positive stop locking lever, making sure the lever snaps into position and then secure by tightening the miter handle.
- If the miter angle desired is not one of the nine positive stops, simply lock the miter table into position by turning the miter handle in the clockwise direction.

#### Miter Angle Pointer Adjustment (Fig. 17):

- Move the table to the 0° positive stop.
- Loosen the screw (4) that holds the indicator with a Phillips screwdriver.
- Adjust the indicator (3) to the 0° mark and retighten the screw.

#### ADJUSTING FENCE SQUARENESS (FIG. 18)

- Lower the cutting arm and lock in position.
- Loosen the three fence locking bolts (1) using a 6 mm wrench.
- Using a square (3), lay the heel of the square against the blade and the ruler against the fence (2) as shown.
- Adjust the fence to be 90° to the blade and tighten the three fence locking bolts.

**NOTE:** If the saw has not been used recently, recheck blade squareness to the fence and readjust if needed.

 After fence has been aligned, make a cut at 90° using a scrap of wood and check squareness on the piece. Readjust if necessary.







#### SETTING CUTTING DEPTH (FIG. 19)

The depth of cut can be preset for even and repetitive shallow cuts.

- Adjust the cutting head down until the teeth of the blade are at the desired depth.
- While holding the upper arm in that position, turn the stop knob (1) until it touches the stop plate (2).
- Recheck the blade depth by moving the cutting head front to back through the full motion of a typical cut along the control arm.

#### MAXIMUM CUTTING DEPTH (FIG. 19)

The maximum depth travel of the cutting head was set at the factory. Check to see that the cutting head does not extend more than 1/4 in. below the table insert and does not touch the control arm throat or any part of the base or table. If the maximum depth needs readjusting:

- Loosen the bolts of the stop plate (2).
- Move the cutting head down until the blade extends just 1/4 in. below the table insert.
- Adjust the stop plate (2) to touch the bottom of the stop knob (1) when the stop knob is raised fully.
- Recheck the blade depth by moving the cutting head front to back through the full motion of a cut along the control arm. If the blade touches the inside of the control arm, readjust the setting.

#### POWER CORD STORAGE (FIG. 20)

For convenience and to prevent damage to the power cord when the miter saw is not in use or during transportation, the slide carriage has two clamps on the left side for cord storage.

• Wrap the power cord (1) onto the storage clip (2) when saw is not in use.

#### PENCIL STORAGE (FIG. 21)

Storage bracket (1) for the pencil (2) (not included) is located on the right extension wing (3) of the miter saw.

**NOTE:** Storage for the blade wrench is shown on page 12.









#### TO TURN LASER GUIDE ON (FIG. 22)

- To turn laser on, press on/off rocker switch (1) to "ON" position.
- To turn laser off, press on/off rocker switch (1) to "OFF" position.

#### ALIGNING THE LASER GUIDE (FIG. 22, 24)

The laser beam must always be correctly aligned with the blade to ensure straight, even cutting. Your tool is equipped with a laser cutting guide that uses a Class IIIa laser beam. The laser beam will enable you to preview the saw blade path on the stock to be cut before starting the miter saw. **The saw must be connected to the power source and the laser on/off switch must be turned on for the laser line to show.** 

#### **WARNING**

When doing any laser guide adjustments, always insert a padlock or chain with padlock (not included) through the hole (2) in the trigger switch, locking the tool's switch and preventing turning the machine on. Do not remove the padlock from the ON/OFF switch until all laser adjustments are completed.

#### AVOID DIRECT EYE CONTACT

- A laser is radiated when the laser guide is turned on. Avoid direct eye contact.
- Laser Warning Label: Max. Output < 5 mW Wavelength: 630-660 nm, Complies with 21 CFR 1040.10 and 1040.11. Class Illa Laser Product.
- Laser Aperture Label: AVOID EXPOSURE: Laser radiation is emitted from this aperture. (Fig. 23)
- NOTE: All the adjustments for the operation of this machine have been completed at the factory. Due to normal wear and use, some occasional readjustments may be necessary.
- CAUTION: Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.
- CAUTION: The use of optical instruments with this product will increase eye hazard.
- WARNING: Do not attempt to repair or disassemble the laser. If unqualified persons attempt to repair this laser product, serious injury may result. Any repair required on this laser product should be performed by an authorized service center personnel.





LASER RADIATION-AVOID DIRECT EYE EXPOSURE RAYONNEMENT LASER – ÉVITEZ TOUT CONTACT DIRECT AVEC LES YEUX RADIACIÓN LÁSER: EVITE LA EXPOSICIÓN DIRECTA A LOS 0.JOS Max. Output < 5 mW Wavelength: 630-660 nm Complies with 21 CFR 1040.10 and 1040.11 Puissance maximale < 5 MW Longueur d'onde : 630 à 660 nm Ce produit est conforme aux normes 21 CFR 1040.10 et 1040.11 Salida máxima: < 5 mW Longitud de onda: 630 – 660 nm Cumple con las normas 21 CFR 1040.10 y 1040.11 CLASS IIIa LASER PRODUCT PRODUIT LASER DE CLASSE IIIA PRODUCT LÁSER CLASE IIIA







#### A. Check Laser Beam Alignment (Fig. 24)

- Set the saw to a 0° miter and 0° bevel setting.
- Take a board and, using a straight edge (not included), mark a 90° line on the top and front of the board. This line will serve as a "pattern line" for all laser beam alignments. Place the board on the saw table.
- Carefully lower the saw head down to align the saw blade with the pattern line. Position the saw blade to the left, center or right side of the "pattern line" depending on your preference for the laser beam location.
- With the saw plugged in and the main on/off switch padlocked, turn on the laser guide. Your saw has been preset with the laser beam to the right side of the blade.
- Looking at the front of the board, if the laser beam is not parallel to the "pattern line" please follow the instructions listed below under Procedure A.
- Looking at the top of the board, if the laser beam is not parallel to the "pattern line" please follow the instructions listed below under Procedure B.

Remove the two blue caps that are covering the (3) and (4) location adjustment screws with a small slotted screwdriver (not included).







## B. Adjusting the Position of the Laser Beam (Fig. 25, 26, 27)

**NOTE:** There are two adjustment screws on the laser guide. Use a 3 mm hex wrench to make any needed adjustments. Procedure A (Fig. 25, 26)

 Slightly turn adjustment screw (3) to adjust the vertical angle of laser beam on the front of the board. If the laser beam is angled from left to right, turn the adjustment screw (3) clockwise; If the laser beam is angled right to left, turn the adjustment screw (3) counterclockwise until the laser beam is parallel with the vertical pattern line.

Procedure B (Fig. 25, 27)

- Slightly turn adjustment screw (4) to adjust the horizontal angle of laser beam on the top of the board. If the laser beam is out of parallel from left to right, turn the adjustment screw (4) clockwise; If the laser beam is out of parallel from right to left, turn the adjustment screw (4) counterclockwise until the laser beam is parallel with the horizontal pattern line.
- Recheck the laser beam alignment.





#### **BEFORE USING THE MITER SAW**

### 

To avoid mistakes that could cause serious, permanent injury, do not plug the tool in until the following steps are completed:

- Completely assemble and adjust the saw, following the instructions (SEE ASSEMBLY AND • ADJUSTMENTS SECTIONS).
- Learn the use and function of the ON/OFF switch, upper and lower blade guards, stop latch, bevel lock handle and cover plate screws.
- Review and understand all safety instructions and operating procedures in this Operator's Manual (SEE SAFETY & OPERATIONS SECTIONS).
- Review the MAINTENANCE and TROUBLESHOOTING for your miter saw.
- To avoid injury or possible death from electrical shock, make sure your fingers do not touch • the plug's metal prongs when plugging or unplugging your miter saw (SEE ELECTRICAL REQUIREMENTS AND SAFETY SECTIONS).

#### **BEFORE EACH USE**

Inspect your saw.

- Disconnect the miter saw. To avoid injury from accidental starting, unplug the saw before making any adjustments, including setup and blade changes.
- Compare the direction of rotation arrow on the guard to the direction arrow on the blade. The blade teeth should always point downward at the front of the saw.
- Tighten the arbor bolt.
- Tighten the cover plate screw.
- Check for damaged parts, including:
  - Alignment of moving parts
  - Damaged blade teeth
  - Damaged electric cords
  - Binding of moving parts
  - Mounting holes
- Function of arm return spring and lower guard: Push the cutting arm all the way down and then let it rise until it stops. The lower guard should close fully. Follow the instructions in the Troubleshooting Guide for adjustment, if necessary.
- Keep all guards in place, in working order and properly adjusted. If any part of this miter • saw is missing, damaged or broken, or any electrical parts do not work, turn off the saw and unplug it. Replace damaged, missing or defective parts before using the saw again.
- Maintain tools with care. Keep the miter saw clean for best and safest performance. Follow • instructions for lubricating. Do not apply lubricants to the blade while it is spinning.
- Remove all adjusting wrenches from the tool before turning it on.

#### USE ONLY THE RECOMMENDED ACCESSORIES

- Follow the instructions that come with the accessory. The use of improper accessories may cause risk of injury to persons.
- Choose the correct 10 in. blade for the material and the type of cutting you plan to do.
- Make sure the blade is sharp, undamaged and properly aligned. With the saw unplugged, push the cutting arm all the way down. Manually spin the blade and check for clearance. Tilt the miter head to a 45° bevel and repeat the test.
- Make sure the blade and arbor collars are clean.
- Make sure all clamps and locks are tight and there is no excessive play in any parts.



#### KEEP YOUR WORK AREA CLEAN

Cluttered areas and benches invite accidents.

### 

To avoid burns or other fire damage, never use the miter saw near flammable liquids, vapors or gases.

- Plan ahead to protect your eyes, hands, face and ears.
- Read and understand the operator's manual and labels affixed to the tool. Learn its application and limitations as well as the potential hazards specific to this tool. To avoid injury from accidental contact with moving parts, do not layout, assemble or set up work on the miter saw.
- Avoid accidental starting. Make sure the switch is in the OFF position before plugging the miter saw into a power outlet.

#### PLAN YOUR WORK

Use the right tool. Do not force a tool or attachment to do a job it was not designed to do. Use a different tool for any workpiece that cannot be held in a solidly braced, fixed position.

## 

This machine is NOT designed for cutting masonry, masonry products or ferrous metals (steel, iron and iron-based metals). Use this miter saw to cut only wood and wood by-products. Other materials may shatter, bind the blade or create other dangers. Remove all nails that may be in the workpiece to prevent sparking that could cause a fire.

#### DRESS FOR SAFETY

Any power tool can throw foreign objects into the eyes. This can result in permanent eye damage. Everyday eyeglasses have only impact resistant lenses and are not safety glasses. Glasses or goggles not in compliance with ANSI Z87.1 could seriously injure you if they break.

- Do not wear loose clothing, gloves, neckties or jewelry (rings, watches). They can get caught and draw you into moving parts.
- Wear non-slip footwear.
- Tie back long hair.
- Roll long sleeves above the elbow.
- Noise levels vary widely. To avoid possible hearing damage, wear earplugs when using any miter saw.
- For dusty operations, wear a dust mask along with safety goggles.

#### INSPECT YOUR WORKPIECE

- Make sure there are no nails or foreign objects in the part of the workpiece being cut.
- Plan your work to avoid small pieces that may bind or are too small to clamp and hold securely.
- Plan the way you will grasp the workpiece from start to finish. Avoid awkward operations and hand positions. A sudden slip could cause your fingers or hand to move into the blade.

#### DO NOT OVERREACH

Keep good footing and balance. Keep your face and body to one side, out of the line of a possible kickback. NEVER stand in the line of the blade.



#### Never cut freehand:

- Brace your workpiece firmly against the fence and table stop so it will not rock or twist during the cut.
- Make sure there is no debris between the workpiece and the table or fence. Make sure there are no gaps between the workpiece, fence and table that will let the workpiece shift after it is cut.
- Keep the cut piece free to move sideways after it is cut off. Otherwise, it could get wedged against the blade and thrown violently.
- Only the workpiece should be on the saw table.
- Secure work. Use clamps or a vise to help hold the work when it is practical.

#### USE EXTRA CAUTION WITH LARGE OR ODD SHAPED WORKPIECES

- Use extra supports (tables, sawhorses, blocks, etc.) for workpieces large enough to tip.
- Never use another person as a substitute for a table extension or as an additional support for a workpiece that is longer or wider than the basic miter saw table, or to help feed, support or pull the workpiece.
- Do not use this saw to cut small pieces. If the workpiece being cut would cause your hand or fingers to be within 7-1/2 in. of the saw blade, the workpiece is too small. Keep hands and fingers out of the "no-hands zone" area marked on the saw table.
- When cutting odd shaped workpieces, plan your work so it will not bind in the blade and cause possible injury. Moulding, for example, must lie flat or be held by a fixture or jig that will not let it move when cut.
- Properly support round material such as dowel rods or tubing, which have a tendency to roll when cut, causing the blade to "bite."

### 

To avoid injury, follow all applicable safety instructions when cutting non-ferrous metals:

- Use only saw blades specifically recommended for non-ferrous metal cutting.
- Do not cut metal workpieces that must be hand held. Clamp workpieces securely.
- Cut non-ferrous metals only if you are under the supervision of an experienced person.

#### WHEN SAW IS RUNNING

#### 

Do not allow familiarity from frequent use of your miter saw to result in a careless mistake. A careless fraction of a second is enough to cause severe injury.

Before cutting, if the saw makes an unfamiliar noise or vibrates, stop immediately. Turn the saw OFF. Unplug the saw. Do not restart until you find and correct the problem.



#### **BODY AND HAND POSITION (FIG. 28)**

## 

Never place hands near the cutting area. Proper positioning of your body and hands when operating the miter saw will make cutting easier and safer. Keep children away. Keep all visitors at a safe distance from the miter saw. Make sure bystanders are clear of the saw and workpiece. Do not force the saw. It will do the job better and safer at its designed rate.

#### Starting a cut:

- Place hands at least 7-1/2 in. away from the path of the blade – out of the "no-hands zone."
- Hold workpiece firmly against the fence to prevent movement toward the blade.
- With the power switch OFF, bring the saw blade down to the workpiece to see the cutting path of the blade.
- Squeeze trigger switch to start saw.
- Lower blade into workpiece with a firm downward motion.

#### Finishing a cut:

- Hold the cutting arm in the down position.
- Release trigger switch and wait for all moving parts to stop before moving your hands and raising the cutting arm.
- If the blade doesn't stop within 6 seconds, unplug the saw and follow the instructions in TROUBLESHOOTING.

#### Before freeing jammed material:

- Release trigger switch.
- Wait for all moving parts to stop.
- Unplug the miter saw.



#### **BASIC SAW OPERATIONS**

#### 

For your convenience, your saw has an electric brake. The brake is not a safety device. Never rely on it to replace the proper use of the guard on your saw. If the blade does not stop within 6 seconds, unplug the saw and follow the instructions in TROUBLESHOOTING.



#### TO TURN SAW ON (FIG. 29)

This miter saw is equipped with an ON/OFF trigger switch (2). With the safety lock (3) pressed, squeeze the trigger switch to turn the miter saw ON.

**NOTE:** Make the ON/OFF switch childproof. Insert a padlock or chain with a padlock (not included) through the hole (4) in the trigger switch, locking the tool's switch and preventing children and other unauthorized users from turning the machine on.

The miter saw is equipped with an electric brake. When the trigger switch is released, the electric blade brake will stop the blade within 6 seconds.

#### 

- To avoid injury, after completing a cut and releasing the trigger switch, allow the blade brake to activate and stop the blade before raising the cutting head.
- To avoid injury, check and tighten the arbor bolt periodically.



## SLIDING FENCE (FIG. 30)

The sliding fence must be extended when making any bevel cut. Failure to extend the sliding fence will not allow enough space for the blade to pass through which could result in serious injury. At extreme miter or bevel angles the saw blade may also contact the fence.

- Unlock the fence cam locking lever (1) by pushing it back, AWAY from the fence.
- Extend the fence (2) by sliding it out to match the degree of the bevel cut. Lock the fence cam locking lever by pulling it IN toward the fence. NOTE: When transporting the saw, always secure the sliding fence in the collapsed position and locking it.

#### SLIDING CARRIAGE SYSTEM (FIG. 31)

### 

To reduce the risk of injury, return carriage to the full rear position after each crosscut operation.

- For chop cutting operations on small workpieces, slide the cutting head assembly completely toward the rear of the unit and tighten the carriage lock knob (1).
- To cut wide boards up to 12 in., the carriage lock knob must be loosened to allow the cutting head to slide freely.

### MITER DETENT OVERRIDE (FIG. 32)

The miter detent override allows for the table to be micro adjusted, disengaging the positive detent stops feature. When a required miter angle is close to a positive detent stop, this override prevents the wedge on the miter arm from slipping into that detent slot on the base.

- Unlock the miter table by turning the miter handle (1) counterclockwise.
- While holding the miter handle (1), pull upward on the positive stop locking lever (2) and press the override lock IN (3), then release the positive stop locking lever (2) while holding the override lock IN. The detent override is now engaged.
- Turn the table to the desired angle, secure the table by turning the miter handle (1) clockwise.
- To disengage the detent override, loosen the miter handle (1) and pull the positive stop locking lever (2) up. This will release the override lock and the table will now stop at the positive detent angles.









#### BEFORE LEAVING THE SAW

- Never leave tool running unattended. Turn power OFF. Wait for all moving parts to stop.
- Make workshop childproof. Lock the shop. Disconnect master switches. Store tool away from children and other unqualified users.

#### 

To avoid injury from materials being thrown, always unplug the saw to avoid accidental starting and remove small pieces of material from the table cavity.

#### MITER CUT (FIG. 33)

- When a miter cut is required, unlock the miter table by turning the miter handle (1) counterclockwise.
- While holding the miter handle, press down on the positive stop locking lever (2).
- Rotate the miter table to the right or left with the miter handle.
- When the table is in the desired position, as shown on the miter scale (3), release the positive stop locking lever and tighten the miter handle. The table is now locked at the desired angle. Positive stops are provided at 0°, 15°, 22.5°, 31.6° and 45°.

**IMPORTANT:** Always tighten the miter handle before performing a cut.

## BEVEL CUT (FIG. 33, 34)

#### 

The sliding fence must be extended when making any bevel cut. Failure to extend the sliding fence will not allow enough space for the blade to pass through which could result in serious injury. At extreme miter or bevel angles, the saw blade may also contact the fence.

- When a bevel cut is required, loosen the bevel lock handle (1) by turning it clockwise (Fig. 33).
- Tilt the cutting head to the desired angle, as shown on the bevel scale (2) (Fig. 34).
- The blade can be positioned at any angle, from a 90° straight cut (0° on the scale) to a 45° left bevel. Tighten the lock handle (1) to lock the cutting head in position. Positive stops are provided at 0°, 33.9° and 45°.

**NOTE:** The saw comes with a 33.9° bevel detent pin for setting up crown moulding cuts when the angle of the walls equals 90°.







#### 33.9° BEVEL DETENT PIN FOR CROWN MOULDINGS (FIG. 35)

- Push the bevel detent stop pin (2) in toward the front of the machine.
- Loosen the bevel lock handle (1).
- Rotate the cutting head until the bevel detent pin stops the bevel angle at 33.9° on the bevel scale.
- Tighten the bevel lock handle before you make your cut.



### COMPOUND CUT (FIG. 36)

A compound cut is the combination of a miter and a bevel cut simultaneously.

- Extend the sliding fence as described in " SLIDING FENCE."
- Loosen the bevel lock handle (1) and position the cutting head at the desired bevel position. Lock the bevel lock handle.
- Loosen the miter handle (2). Press down the positive stop locking lever (3) and position the table at the desired angle. Release the positive stop locking lever (3) and lock the miter handle (2).

## SLIDE CUTTING WIDE BOARDS UP TO 12 IN. WIDE

**CAUTION :** Always use a work clamp to maintain control and reduce the risk of workpiece damage and personal injury.

#### To avoid injury:

- Let the blade reach full speed before cutting. This will help reduce the risk of a thrown workpiece.
- Do not make crosscuts by lowering the blade and pulling the saw head through the wood toward you. The blade may try to climb up on top of the workpiece, causing the cutting assembly and spinning blade to kick back forcefully.





#### TO SLIDE CUT WIDE BOARDS (FIG. 37)

- Unlock the carriage lock handle (1) and allow the cutting head assembly to move freely.
- Set both the desired bevel angle and/or the miter angle and lock into position.
- Use a hold down clamp to secure the workpiece (4).
- Grasp the switch handle (2) and pull the carriage (3) forward until the center of the saw blade is over the front of the workpiece (4).
- Engage the trigger to turn the saw on.
- When the saw reaches full speed, slowly push the saw handle down, cutting through the leading edge of the workpiece (4).
- Slowly move the saw handle back toward the fence, completing the cut.
- Release the trigger and allow the blade to stop spinning before raising the cutting head and removing the workpiece (4).

#### CUTTING BOWED MATERIAL (FIG. 38)

A bowed workpiece must be positioned against the fence and secured with a clamp (1) before cutting as shown. Do not position workpiece incorrectly or try to cut the workpiece without the support of the fence. This will cause the blade to bind and could result in personal injury.

#### **CUTTING GROOVES (FIG. 39)**

#### 

DO NOT USE A DADO BLADE, use only the standard 10 in. diameter saw blade for this operation.

- Mark lines identifying the width and depth of the desired cut on the workpiece and position on the table so the outside tip of the blade is positioned on the inside edge of the line. Use a clamp to secure the workpiece beside the blade.
- Lower the cutting head to the depth marked on the workpiece, holding the upper arm, and adjust the stop knob (1) until it touches the stop plate (2).
- Cut two parallel grooves as shown in Fig. 39.









#### WORKPIECE SUPPORT AND REPETITIVE CUTTING USING THE STOP PLATE (FIG. 40, 41)

**NOTE:** Long pieces need extension wing support.

- Lift up the lock lever (1) to unlock the extension table. Slide the extension wing to desired position and push down the lock lever to tighten. If the lock lever (1) is not tight enough, adjust the nuts (4, 5) 1/4 turn counterclockwise (Fig. 41).
- The stop plate (3) is designed for repetitive cutting. Only use one stop plate (3) at a time. Rotate the stop plate (3) to vertical position and tighten the locking screw (2). If the stop plate is too tight to rotate, loosen the locking screw (2) 1/4 turn.





#### AUXILIARY WOOD FENCE (FIG. 42)

When making multiple or repetitive cuts that result in cut-off pieces of one inch or less, it is possible for the saw blade to catch the cut-off piece and throw it out of the saw or into the blade guard and housing, possibly causing damage or injury. To minimize this, an auxiliary wood fence can be mounted to your saw.

Holes are provided in the saw fence to attach an auxiliary wood fence. This fence is to be constructed of straight wood approximately 3/4 in. thick by 2-1/2 in. high by 18 in. long.

Attach the wood fence securely and make a full depth cut to make a blade slot.





Check for interference between the wood fence and the lower blade guard. Adjust if necessary.

**NOTE:** This auxiliary fence is used only with the saw blade in the 0° bevel position (90° to the table). The auxiliary wood fence must be removed when bevel cutting.

#### CUTTING BASE MOULDING (FIG. 43)

Base mouldings and many other mouldings can be cut on a compound miter saw. The setup of the saw depends on moulding characteristics and applications, as shown. Perform practice cuts on scrap material to achieve best results:

- Always make sure mouldings rest firmly against the fence and table. Use hold-down or C-clamps, whenever possible, and place tape on the area being clamped to avoid marks.
- Reduce splintering by taping the cut area prior to making cut. Mark cut line directly on the tape.
- Splintering typically happens due to wrong blade application and thinness of the material.

**NOTE:** Always perform a dry run cut so you can determine if the operation being attempted is possible before power is applied to the saw.

#### CUTTING CROWN MOULDING (FIG. 44, 45)

Your compound miter saw is suited for the difficult task of cutting crown moulding. To fit properly, crown moulding must be compound-mitered with extreme accuracy. The two surfaces on a piece of crown moulding that fit flat against the ceiling and wall are at angles that, when added together, equal exactly 90°.

Most crown moulding has a top rear angle (the section that fits flat against the ceiling) of 52° and a bottom rear angle (the section that fits flat against the wall) of 38°.

In order to accurately cut crown moulding for a **<u>90° inside or outside corner</u>**, lay the moulding with its broad back surface flat on the saw table.

When setting the bevel and miter angles for compound miters, remember the settings are interdependent; changing one changes the other, as well.







**Bevel/Miter Settings** 



45

## NOTE: The chart below references a compound cut for crown moulding ONLY WHEN THE ANGLE BETWEEN THE WALLS EQUALS 90°.

#### **Bevel/Miter Settings**

KEY	BEVEL SETTING	MITER SETTING	TYPE OF CUT		
Inside corn	Inside corner - Left side				
IL	33.9°	31.6° Right	<ol> <li>Position top of moulding against fence.</li> <li>Miter table set at RIGHT 31.6°.</li> <li>LEFT side is finished piece.</li> </ol>		
Inside corn	Inside corner - Right side				
IR	33.9°	31.6° Left	<ol> <li>Position bottom of moulding against fence.</li> <li>Miter table set at LEFT 31.6°.</li> <li>LEFT side is finished piece.</li> </ol>		
Outside co	rner - Left side				
OL	33.9°	31.6° Left	<ol> <li>Position bottom of moulding against fence.</li> <li>Miter table set at LEFT 31.6°.</li> <li>RIGHT side is finished piece.</li> </ol>		
Outside corner - Right side					
OR	33.9°	31.6° Right	<ol> <li>Position top of moulding against fence.</li> <li>Miter table set at RIGHT 31.6°.</li> <li>RIGHT side is finished piece.</li> </ol>		


### **CROWN MOULDING CHART Compound Miter Saw** Miter and Bevel Angle Settings Wall to Crown Moulding Angle

	52/38° Crov	vn Moulding	45/45° Cro	wn Moulding		52/38° Crov	wn Moulding	45/45° Crov	vn Moulding
Angle Between Walls	Miter Setting	Bevel Setting	Miter Setting	Bevel Setting	Angle Between Walls	Miter Setting	Bevel Setting	Miter Setting	Bevel Setting
67	42.93	41.08	46.89	36.13	124	18.13	21.71	20.61	19.39
68	42.39	40.79	46.35	35.89	125	17.77	21.34	20.21	19.06
69	41.85	40.50	45.81	35.64	126	17.42	20.96	19.81	18.72
70	41.32	40.20	45.28	35.40	127	17.06	20.59	19.42	18.39
71	40.79	39.90	44.75	35.15	128	16.71	20.21	19.03	18.06
72	40.28	39.61	44.22	34.89	129	16.37	19.83	18.64	17.72
73	39.76	39.30	43.70	34.64	130	16.02	19.45	18.25	17.39
74	39.25	39.00	43.18	35.38	131	15.67	19.07	17.86	17.05
75	38.74	38.69	42.66	34.12	132	15.33	18.69	17.48	16.71
76	38.24	38.39	42.15	33.86	133	14.99	18.31	17.09	16.38
77	37.74	38.08	41.64	33.60	134	14.66	17.93	16.71	16.04
78	37.24	37.76	41.13	33.33	135	14.30	17.55	16.32	15.70
70	36.75	37.45	40.62	33.07	136	13.97	17.17	15.94	15.36
80	36.27	37.43			137	13.63	16.79	15.56	15.02
			40.12	32.80	138	13.30	16.40	15.19	14.62
81	35.79	36.81	39.62	32.53	139	12.96	16.02	14.81	14.34
82	35.31	36.49	39.13	32.25	140	12.63	15.64	14.43	14.00
83	34.83	36.17	38.63	31.98	141	12.30	15.25	14.06	13.65
84	34.36	35.85	38.14	31.70	142	11.97	14.87	13.68	13.31
85	33.90	35.52	37.66	31.42	143	11.64	14.48	13.31	12.97
86	33.43	35.19	37.17	31.34	144	11.31	14.09	12.94	12.62
87	32.97	34.86	36.69	30.86	145	10.99	13.71	12.57	12.29
88	32.52	34.53	36.21	30.57	146	10.66	13.32	12.20	11.93
89	32.07	34.20	35.74	30.29	147	10.34	12.93	11.83	11.59
90	31.62	33.86	35.26	30.00	148	10.01	12.54	11.46	11.24
91	31.17	33.53	34.79	29.71	149	9.69	12.16	11.09	10.89
92	30.73	33.19	34.33	29.42	150	9.37	11.77	10.73	10.55
93	30.30	32.86	33.86	29.13	151	9.05	11.38	10.36	10.00
94	29.86	32.51	33.40	28.83	152	8.73	10.99	10.00	9.85
95	29.43	32.17	32.94	28.54	153	8.41	10.60	9.63	9.50
96	29.00	31.82	32.48	28.24	154	8.09	10.00	9.27	9.15
97	28.58	31.48	32.02	27.94	155	7.77	9.82	8.91	8.80
98	28.16	31.13	31.58	27.64	156	7.46	9.43	8.55	8.45
99	27.74	30.78	31.13	27.34	150	7.14	9.04	8.19	8.10
100	27.32	30.43	30.68	27.03	158	6.82	8.65	7.83	7.75
101	26.91	30.08	30.24	26.73	150	6.51	8.26	7.47	7.40
102	26.50	29.73	29.80	26.42	160	6.20	7.86	7.47	7.40
103	26.09	29.38	29.36	26.12	161	5.88	7.80	6.75	6.70
104	25.69	29.02	28.92	25.81	161	5.57	7.08	6.39	6.35
105	25.29	28.67	28.48	25.50	163	5.26	6.69	6.03	6.00
106	24.89	28.31	28.05	25.19	164	4.95	6.30	5.68	5.65
107	24.49	27.96	27.62	24.87	165	4.93	5.90	5.32	5.30
108	24.10	27.59	27.19	24.56	166	4.03	5.50	4.96	4.94
109	23.71	27.23	26.77	24.24	167	4.01	5.12	4.90	4.94
110	23.32	26.87	26.34	23.93	168	3.70	4.72	4.01	4.39
111	22.93	26.51	25.92	23.61	169	3.39	4.72	3.90	3.89
112	22.55	26.15	25.50	23.29	170	3.08	4.33 3.94	3.90	3.53
113	22.17	25.78	25.08	22.97	170	2.77	3.94	3.54	3.55
114	21.79	25.42	24.66	22.66	171	2.17	3.54	2.83	2.83
115	21.73	25.05	24.00	22.33	172				
116	21.42	24.68	24.23	22.03	173	2.15	2.75	2.48	2.47
117	21.04	24.00	23.64	22.01		1.85	2.36	2.12	2.12
	20.87		23.43	21.68	175	1.54	1.97	1.77	1.77
118		23.94			176	1.23	1.58	1.41	1.41
119	19.93	23.57	22.61	21.03	177	0.92	1.18	1.06	1.06
120	19.57	23.20	22.21	20.70	178	0.62	0.79	0.71	0.71
121	19.20	22.83	21.80	20.38	179	0.31	0.39	0.35	0.35
122	18.84	22.46	21.40	20.05			ools.com	$\frown$	



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- To avoid fire or toxic reaction, never use gasoline, naphtha acetone, lacquer thinner or similar highly volatile solvents to clean the miter saw.
- To avoid injury from unexpected starting or electrical shock, unplug the power cord before working on the saw.
- For your safety, this saw is double insulated. To avoid electrical shock, fire or injury, use only parts identical to those identified in the parts list. Reassemble exactly to avoid electrical shock.

## **REPLACING CARBON BRUSHES (FIG. 46)**

The carbon brushes (3) furnished will last approximately 50 hours of running time, or 10,000 ON/OFF cycles. Replace both carbon brushes when either has less than 1/4 in. length of carbon remaining, or if the spring or wire is damaged or burned. To inspect or replace brushes, first unplug the saw. Remove the black plastic cap (1) on the side of the motor (2). Carefully remove the spring-loaded cap. Pull out the brush and replace. Replace for the other side. Reverse the procedure for reassembly. Press the metal part of the carbon brush into the hole where the carbon part fits. Tighten the cap snugly but do not overtighten.

**NOTE:** To reinstall the same brushes, first make sure the brushes go back in the way they came out. This will avoid a break-in period that reduces motor performance and increases wear.

### LOWER BLADE GUARD (FIG. 47)

Do not use the saw without the lower blade guard. The lower blade guard is attached to the saw for your protection. Should the lower guard become damaged, do not use the saw until the damaged guard has been replaced. Check regularly to make sure the lower guard is working properly. Clean the lower guard of any dust or buildup with a damp cloth.

- Do not use solvents on the guard. They could make the plastic cloudy and brittle.
- When cleaning the lower guard, unplug the saw to avoid unexpected start-up.





### SAWDUST

Periodically, sawdust will accumulate under the worktable and base. This could cause difficulty in the movement of the worktable when setting up a miter cut. Frequently blow out or vacuum up the sawdust.

If blowing sawdust, wear proper eye protection to keep debris from blowing into eyes.

### LUBRICATION (FIG. 48)

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

#### Lubricate the following as necessary:

**Chop pivot:** Light machine oil or aerosol will penetrate from the ends of the junction points. A qualified service technician can remove the pivot unstop to relieve tension and the 2 metric set screws holding the shaft, in order to drive the shaft about 3/4 in. right. Exposed surfaces are lubricated with automotive type oil.

**Central pivot of plastic guard:** Use light household oil (sewing machine oil) on metal-tometal or metal-to-plastic guard contact areas as required for smooth, quiet operation. Avoid excessive oil as sawdust will cling to it.





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To avoid injury from accidental starting, always ensure that the switch is in the OFF position and unplug the tool before moving, replacing the blade or making adjustments.

TROUBL	<b>ESHOOTING</b>	- MOTOR
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PROBLEM	PROBLEM CAUSE	CORRECTIVE ACTION
Brake does not	1. Motor brushes not sealed or lightly	1. Inspect, clean and/or replace
stop the blade	sticking.	brushes. See MAINTENANCE
within 6 seconds.	2. Motor brake overheated from use	section.
	of defective or wrong size blade or	2. Use the recommended blade.
	rapid ON/OFF cycling.	Allow to cool down.
	3. Arbor bolt loosened.	3. Retighten arbor bolt.
	4. Other.	4. Contact customer service.
Motor does not	1. Blown fuse.	1. Use and check the 15A time-delay
start.		fuse or the circuit breaker.
	2. Worn brush.	2. See MAINTENANCE section.
	3. Other.	<ol><li>Contact customer service.</li></ol>
Excessive brush	1. Brush worn.	1. Replace brushes.
spark when the		
switch is released.		

### **TROUBLESHOOTING – SAW OPERATION**

PROBLEM	PROBLEM CAUSE	CORRECTIVE ACTION
Blade hits table.	1. Misalignment.	1. See ADJUSTMENT section.
Angle of cut not	1. Miter table locked.	1. Push positive stop locking lever
accurate. Cannot		down and rotate table. See
adjust miter.		OPERATION section.
	2. Sawdust under table.	2. Vacuum or blow out dust. WEAR
		EYE PROTECTION.
Cutting arm wobbles.	1. Loose pivot points.	1. See ADJUSTMENT section.
Cutting arm will	1. Part failure.	1. Contact customer service.
not fully raise or	2. Pivot spring not replaced properly	2. Contact customer service.
blade guard will	after service.	
not fully close.	3. Sawdust build-up.	3. See CARE AND MAINTENANCE
		section.
Blade binds, jams,	1. Improper operation.	1. See BASIC SAW OPERATIONS
burns wood.		section.
	2. Dull blade.	2. Replace or sharpen blade.
	3. Improper blade size.	3. Replace with 10 in. diameter
		blade.
	4. Warped blade.	4. Replace blade.
Saw vibrates or	1. Saw blade not round.	1. Replace blade.
shakes.	2. Saw blade damaged.	2. Replace blade.
	3. Saw blade loose.	3. Tighten arbor bolt.
	4. Saw blade warped.	4. Replace blade.



## REPLACEMENT PARTS LIST - SAW (PART A)

I.D.	Description	Size	Q'ty
083Y	COMPRESSION SPRING		1
083Z	CORD CLAMP		1
oces	COMPRESSION SPRING		1
ocks	SPRING WIRE		1
0DVJ	BLADE WRENCH		1
MELO	HEX WRENCH	3 mm	1
OJ4E	FLAT WASHER	φ6*13-1	2
OJZF	HEX. SOC. SET SCREW	M6*1.0-10	2
OJZN	ARBOR BOLT	M8*1.25-20	
0K51	CR. RE. COUNT HD. SCREW	M4*0.7-8	4
OKA1	CR.RE. PAN HD. TAPPING SCREW	M3*24-6	1
OK77	CR.RE. PAN HD. TAPPING SCREW	M3*18-16	2
OKB7 OKB8	CR.RE. PAN HD. TAPPING SCREW	M4*18-20	4
OKBO OKB9	CR.RE. PAN HD. TAPPING SCREW	M14 10-20	
OKDY	CR. RE. PAN HD. SCREW	M5 18-10 M5*0.8-25	1
OKDR	CR. RE. PAN HD. SCREW	M5 0.8-25	
		M6*1.0-40	2
OKEO	CR. RE. PAN HD. SCREW		<u> </u>
OKQW		M5*0.8	
OKTS			2
OKUW	TERMINAL		2
OS2B	CR.RE. PAN HD. TAPPING SCREW	M6*1.0-25	2
23NF	ARBOR COLLAR		2
23NX	GUARD-CORD		1
250Z	HEX.SOCKET HD.CAP SCREWS	M5*0.8-35	3
27PF	COMPRESSION SPRING		1
2BLK	COLLAR		1
2DUY	LEAD WIRE ASS'Y		1
2E35	TRIGGER		1
2EYT	POWER CABLE		1
2MOS	LIMIT SWITCH		1
2MDX	CLAMP BOLT		1
2PDF	LASER WARNING LABEL		1
2T9B	ROCK SWITCH ASS'Y		1
2014	CR.RE. PAN HD. ROUND NECK SCREW	M5*0.8-16	1
2VMV	TORSION SPRING		1
2VND	SHAFT SLEEVE		1
2WV9	BLADE		1
34G0	MOTOR ASS'Y		1
34H0	ARM		
34H2	MOTOR HANDLE (UP)		1
34H3	MOTOR HANDLE (DOWN)		
34H3	SEGMENT HANDLE		
	LEVER		
34H5			
34H6			
34HH			
34KE	BUTTON SWITCH		
34PD	LASER ASS'Y		
34PS	PLUG-BUTTON		
34QU	DUST SHIELD		1
34W8	LABEL		1
3537	INSULATE PLATE		1
35FA	LABEL		1
35FB	TRADEMARK LABEL		1
35Q3	HEX. SOC. SET SCREW	M6*1.0-8	1
36Z2	CUSHION		1
3B3F	DUST BAG	1	1
3CK6	CONTROLLER ASS'Y		1
3CMB	CR. RE. TRUSS HD. ROUND NECK SCREW	M6*1.0-10	1
	CR. RE. TRUSS HD. ROUND NECK SCREW	M6*1.0-14	1





I.D.	Description	Size	Q'ty
OCHG	BUMPER	5120	
OCR8	SHAFT		- i
0D8D	COLLAR		1 1
0HG1	COMPRESSION SPRING		1
OJ4E	FLAT WASHER	Φ6*13-1	3
OJBO	WAVE WASHER		2
OJE7	C-RING		1
OJMN	O-RING		1
OJMP	O-RING		1
OJNR	O-RING ROD		1
OJUB	HEX. SOC. HD. CAP BOLT	M5*0.8-12	2
0K5D	CR. RE. COUNT HD. SCREW	M6*1.0-20	1
0K74	CRRE. TRUSS HD. SCREW	M6*1.0-8	1
0K75	CR. RE. TRUSS HD. SCREW	M6*1.0-12	2
OK7X	CR. RE. TRUSS HD. ROUND NECK SCREW	M6*1.0-10	2
OKD7	CR. RE. PAN HD. SCREW	M4*0.7-10	6
OKDJ	CR. RE. PAN HD. SCREW	M5*0.8-12	1
OKDK	CR. RE. PAN HD. SCREW	M5*0.8-16	1
OKDR	CR. RE. PAN HD. SCREW	M5*0.8-10	1
OKDU	CR. RE. PAN HD. SCREW	M6*1.0-12	2
OKQW	LOCK NUT	M5*0.8	2
OKQX	NUT	M6*1.0	3
OKR3	LOCK NUT	M6*1.0	1
262V	ANCHOR PLATE		1
2CD7	SPRING PIN		2
2E7D	CR.RE. PAN HD. ROUND NECK SCREW	M6*1.0-9	1
2EXC	LOCATION PIN		1
2F39	CLEVIS PIN		1
2FG0	KNOB-HANDLE		1
2MC0	TABLE INSERT RIGHT		1
2MC1	TABLE INSERT LEFT		1
2MCC	CLAMP BOLT		1
2N7W	BRACING PLATE		1
2VH6	LINEAR MOTION BEARING		1
2VN6	COLLAR		1
2VN7	BLANKET WASHER		1
2YR6	SPRING GUARD		1
31YA	LINEAR MOTION BEARING		1
34A4	POWER CORD CLAMP		1
34GN	FOLLOWER PLATE (R)		1
34GP	FOLLOWER PLATE (L)		1
34GW	ARM-MITER		1
34GY	SLIDE-BAR BLADE GUARD		1
34GZ	LEVER BRACKET		1
34H1	PC-GUARD		1
34H7	SLIDE-BAR SEAT (REAR)		1
34PJ	Plunger handle ass'y		1
34PL	CUTTER SHAFT GUARD		1
34Q6	TILT POINTER		1
34QD	VISE ASS'Y		1
34QH	Locking handle ass'y		1
34QJ	Locking handle ass'y		1
34R9	SWIVEL SUPPORT ASS'Y		1
34RT	CLAMP BOLT		1
34WG			
	WARNING LABEL		1
35BC	WARNING LABEL BEARING COVER		1 2
			1 2 1

## REPLACEMENT PARTS LIST - SAW (PART B)





## **REPLACEMENT PARTS LIST - SAW (PART C)**

I.D.	Description	Size	Q'ty
082J	CUSHION		1
0CPD	CENTER BOLT		1
0J4M	FLAT WASHER	φ12*21-1	1
0J69	FLAT WASHER	φ6*13-1	1
0J6A	FLAT WASHER	φ8*16-2.5	1
0J7G	FLAT WASHER	3/8*29/32-1/8	1
OJBO	WAVE WASHER		2
ojbg	DISC SPRING WASHER		1
OJPF	HEX. HD. BOLT	M6*1.0-25	3
0JX9	HEX. SOC. SET SCREW	M6*1.0-10	1
OK2N	HEX SOC. HD. CAP SCREW	M8*1.25-25	3
OK55	CR. RE. COUNT HD. SCREW	M5*0.8-8	4
OK6X	CR. RE. TRUSS HD. SCREW	M4*0.7-6	1
OKD6	CR. RE. PAN HD. SCREW	M4*0.7-8	
OKDG	CR. RE. PAN HD. SCREW	M5*0.8-6	2
OKDR	CR. RE. PAN HD. SCREW	M5*0.8-10	
OKDS	CR. RE. PAN HD. SCREW	M5*0.8-40	
okdv okms	CR. RE. PAN HD. SCREW	M6*1.0-16	4
	HEX. NUT	M6*1.0	3
OKQW		M5*0.8	
OKQX OKRO	NUT NUT	M6*1.0 M12*1.75	
OKRO	LUCK NUT	M1211.75 M5*0.8 T=5	2
OKRZ	LOCK NUT	M8*1.25	<u> </u>
22QE	CR. RE. ROUND WASHER HD. SCREW	M5*0.8-16	2
22QL 2BEL	FLAT WASHER	Φ4.2*12-1	
2BLG	SHAFT-PIVOT	Ψ4.2 12-1	
2BQA	PLATE		
2CD2	COMPRESSION SPRING		
2002 2D9W	LOCKING HANDLE ASS'Y		
2MBK	FENCE		
2MBL	ASSIST-FENCE		
2MC8	SUPPORT		
2VZ1	RUBBER INSERT		8
2WRN	PLUNGER HANDLE		1
31XE	SLIDE PLATE		3
349F	PLATE(RIGHT)		1
349G	PLATE(LEFT)		1
34AA	GUIDE CLAMP		1
34GM	BASE		1
34GQ	EXTENSION WING (R)		1
34GR	EXTENSION WING (L)		1
34GS	TABLE		1
34NJ	UPER TUBE		2
34NK	UPER TUBE		2
34Q5	NEEDLE POINTER		1
34Q7	LOCKING HANDLE ASS'Y		1
34W7			1
3527			
35C1			
35F6	BRACKET-TILT		
35F8	WARNING LABEL		
35F9	WARNING LABEL		
35FC	TILTING SCALE		
35FD			
35FE	CAUTION LABEL		





### PARTS LIST - MOTOR

I.D.	Description	Size	Q'ty
3492	MOTOR REAR COVER		1
ОНХ9	NEEDLE BEARING		1
OJBA	WAVE WASHER		1
OJCD	SPRING PIN		1
OJEO	C-RING		1
OJEB	C-RING		1
OJEE	C-RING		1
0JG7	PARALLEL KEY		1
0JX2	HEX. SOC SET SCREW	M5*0.8-6	2
0K43	CR.RE. PAN HD. SCREW & WASHER	M5*0.8-16	2
OK44	CR.RE. PAN HD. SCREW & WASHER	M5*0.8-12	1
ОКАА	CR.RE. PAN HD. TAPPING SCREW	M5*12-16	2
0QGR	COMPRESSION SPRING		1
OQMY	PROTECTOR WIRE		1
୦QQS	BRUSH HOLDER ASS'Y		2
OQQT	BRUSH ASS'Y		2
OQRO	BRUSH COVER		2
0QR2	BEARING BUSHING		1
110A	CR.RE. PAN HD.TAPPING SCREW & WASHER	M5*12-55	2
21AJ	BEARING SEAT		1
2JEG	CR.RE. PAN HD. SCREW & WASHER	M5*0.8-30	4
2MGY	FLOW GUIDE		1
2MHR	GEAR BOX		1
2WR5	MOTOR COVER		1
31QW	CUTTER SHAFT ASS'Y		1
31QV	CUTTER SHAFT		1
32C5	BRACKET STOP ASS'Y		1
32GT	HELIX GEAR		1
32U5	BALL BEARING		1
34G1	FIELD ASS'Y		1
34G2	ARMATURE ASS'Y		1
34G3	ARMATURE ASS'Y		1
35HQ	LEAD WIRE ASS'Y		1
Y3Z9	BALL BEARING		1
Y3ZY	BALL BEARING		1





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#### WARRANTY

The manufacturer will offer replacement parts for this product which under normal usage have proven to be defective in their manufacture or workmanship for a period of THREE (3) years from the date of initial retail purchase. This warranty is valid only to the original purchaser. This warranty is not transferable and does not cover any parts that have been subjected to misuse, abuse, alteration, overload, accident or normal wear of moving parts. Tools that have been sold "as is," sold reconditioned or used as rental equipment are not covered.

Warranty replacement parts can be obtained by contacting the manufacturer at 1-888-3KOBALT. Only the manufacturer is authorized to perform warranty service on this product. This warranty does not apply to accessories or damage caused where repairs have been made or attempted by others.

The manufacturer is not responsible for direct, indirect, incidental or consequential damages. Some states do not allow limitations on how long an implied warranty lasts and/or do not allow the exclusion or limitation of incidental damages, so the above limitations may not apply to you. This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

The manufacturer makes no warranties, representations or promises as to the quality of its power tools other than those specifically stated in this warranty.

#### WARRANTY VOID IF PRODUCT USED FOR COMMERICAL PURPOSES

For replacement parts, call our customer service department at 1-888-3KOBALT (1-888-356-2258).

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