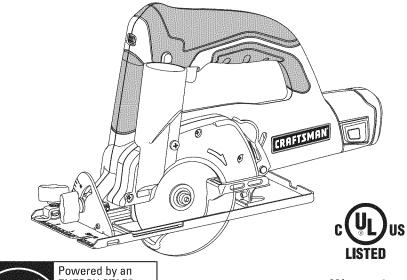
**Operator's Manual** 

# CRAFTSMAN® ΠΕΧΤΕΣ

## **12.0-VOLT LITHIUM-ION** CORDLESS 3-3/8 in. CIRCULAR SAW

Model No. 320.61325





**ENERGY STAR®** qualified battery charger for a

A WARNING: To reduce the risk of injury, the user must read and understand the Operator's manual before using this product.

- Warranty
- Safety
- Assembly
- Operation
- Maintenance

**Charge battery** before first use

Sears Brands Management Corporation, Hoffman Estates, IL 60179 U.S.A. www.craftsman.com

## TABLE OF CONTENTS

Warranty	Page 2
Safety Symbols	Page 3
Safety Instructions	Pages 5-10
Glossary of Woodworking Terms	Pages 10-11
Description	Pages 12-13
Assembly	Page 14
Operation	Pages 14-30
Maintenance	Pages 30-32
Troubleshooting	Page 32
Exploded View and Parts List	Page 33-36
Sears Repair Parts Phone Number	Back Cover

#### **CRAFTSMAN ONE YEAR FULL WARRANTY**

FOR ONE YEAR from the date of purchase, this product is warranted against any defects in material or workmanship. Defective product will be replaced free of charge.

## For warranty coverage details to obtain free replacement, visit the web site: www.craftsman.com.

This warranty does not cover blades and bulbs, which are expendable parts that can wear out from normal use within the warranty period.

This warranty is void if this product is ever used while providing commercial services or if rented to another person.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

Sears Brands Management Corporation, Hoffman Estates, IL 60179

## SAVE THESE INSTRUCTIONS!

## READ ALL INSTRUCTIONS

This cordless circular saw has many features for making its use more pleasant and enjoyable. Safety, performance, and dependability have been given top priority in the design of this product making it easy to maintain and operate.

**A** WARNING: Some dust created by using power tools contains chemicals known to the state of California to cause cancer and birth defects or other reproductive harm.

## SAFETY SYMBOLS

The purpose of safety symbols is to attract your attention to possible dangers.

The safety symbols and the explanations with them deserve your careful attention and understanding. The symbol warnings do not by themselves eliminate any danger. The instructions and warning they give are no substitutes for proper accident-prevention measures.

**WARNING**: Be sure to read and understand all safety instructions in this manual, including all safety alert symbols such as "**DANGER**," "**WARNING**," and "**CAUTION**" before using this saw. Failure to following all instructions listed below may result in electric shock, fire and/or serious personal injury.

#### SYMBOL SIGNAL MEANING

A SAFETY ALERT SYMBOL: Indicates DANGER, WARNING, OR CAUTION. May be used in conjunction with other symbols or pictographs.

**A** DANGER: Indicates an imminently hazardous situation, which, if not avoided, will result in death or serious injury.

**A** WARNING: Indicates a potentially hazardous situation, which, if not avoided, could result in death or serious injury.

**A** CAUTION: Indicates an imminently hazardous situation, which, if not avoided, may result in death or serious injury.

**NOTE:** These inform the user of import information and/or instructions that could lead to equipment or other property damage if they are not followed. Each message is preceded by the word "NOTE," as in the example below:

**NOTE:** Equipment and/or property damage may result if these instructions are not followed.

**WARNING:** To ensure safety and reliability, all repairs should be performed by a qualified service technician at Sears Service Center.



A WARNING: The operation of any power tools can result in foreign objects being thrown into your eyes, which can result in severe eye damage. Before beginning power tool operation, always wear safety goggles or safety glasses with side shield and a full face shield when needed. We recommend a Wide Vision Safety Mask for use over eyeglasses or standard safety glasses with side shields. Always use eye protection which is marked to comply with ANSI Z87.1

## SAVE THESE INSTRUCTIONS

Some of these following symbols may be used on this tool. Please study them and learn their meaning. Proper interpretation of these symbols will allow you to operate the tool better and safer.

SYMBOL	NAME DESIGNATION/EXPLANATION	
V	Volts	Voltage
А	Amperes	Current
Hz	Hertz	Frequency (cycles per second)
W	Watt	Power
min	Minutes	Time
$\sim$	Alternating Current	Type of current
eannorsean ann acta ann	Direct Current	Type or a characteristic of current
n <sub>o</sub>	No Load Speed	Rotational speed, at no load
D	Class II Construction	Double-insulated construction
/min	Per Minute	Revolutions, strokes, surface speed, orbits, etc., per minute
	Wet Conditions Alert	Do not expose to rain or use in damp locations.
8	Read The Operator's Manual	To reduce the risk of injury, user must read and understand operator's manual before using this product.
Ð	Eye Protection	Always wear safety goggles or safety glasses with side shields and a full face shield when operating this product.
A	Safety Alert	Precautions that involve your safety.
	No Hands Symbol	Failure to keep your hands away from the blade will result in serious personal injury.
	No Hands Symbol	Failure to keep your hands away from the blade will result in serious personal injury.
	No Hands Symbol	Failure to keep your hands away from the blade will result in serious personal injury.
	No Hands Symbol	Failure to keep your hands away from the blade will result in serious personal injury.
	Hot Surface	To reduce the risk of injury or damage, avoid contact with any hot surface.

## SAFETY INSTRUCTIONS

#### **GENERAL SAFETY RULES**

**A** WARNING: Read all safety warnings and instructions. Failure to follow the warnings and instructions may result in electric shock, fire and/or serious injury.

#### Save all warnings and instructions for future reference.

The term "power tool" in the warnings refers to your mains-operated (corded) power tool or battery-operated (cordless) power tool.

#### WORK AREA SAFETY

- Keep work area clean and well lit. Cluttered or 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 children and bystanders away while operating a power tool. Distractions can cause you to lose control.

#### **ELECTRICAL SAFETY**

- Power tool plugs must match the outlet. Never modify the plug in any way. Do not use any adapter plugs with earthed (grounded) power tools. Unmodified plugs and matching outlets will reduce risk of electric shock.
- Avoid body contact with earthed or grounded surfaces such as pipes, radiators, ranges and refrigerators. There is an increased risk of electric shock if your body is earthed or 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 for carrying, pulling or unplugging the power tool. Keep cord away from heat, oil, sharp edges or moving parts. Damaged or entangled cords increase the risk of electric shock.
- When operating a power tool outdoors, use an extension cord suitable for outdoor use. Use of a cord suitable for outdoor use reduces the risk of electric shock.
- If operating a power tool in a damp location is unavoidable, use a residual current device (RCD) protected supply. Use of an RCD reduces the risk of electric shock.
- Use the battery only with the charger listed:

BATTERY PACK	CHARGER
320.11221	320.10006

#### PERSONAL SAFETY

- Stay alert, watch what you are doing and use common sense when operating a power tool. Do not use tool while tired or under the influence of drugs, alcohol, or medication. A moment of inattention while operating power tools may result in serious personal injury.
- Use personal protective equipment. Always wear eye protection. Protective equipment, such as dust mask, non-skid safety shoes, hard hat, or hearing protection, used for appropriate conditions will reduce personal injuries.
- Prevent unintentional starting. Ensure that the switch is in the OFF position before connecting to power source and/or battery pack, picking up, or carrying the tool. Carrying power tools with your finger on the switch or energizing in power tools that have the switch on invites accidents.
- Remove any adjusting key or wrench before turning the power tool on. A wrench or a key left attached to a rotating part of the power tool may result in personal injury.
- **Do not overreach. Keep proper footing and balance at all times.** This enables better control of the power tool in unexpected situations.
- Dress properly. Do not wear loose clothing or jewelery. Keep your hair, clothing and gloves away from moving parts. Loose clothes, jewelry or long hair can be caught in moving parts.
- If devices are provided for the connection of dust extraction and collection facilities, ensure these are connected and properly used. Use of these devices can reduce dust-related hazards.

#### POWER TOOL USE AND CARE

- Do not force the power tool. Use the correct power tool for your application. The correct power tool will do the job better and more safely at the rate for which it was designed.
- **Do not use the power tool if the switch does not turn it on and off.** Any power tool that cannot be controlled with the switch is dangerous and must be repaired.
- Disconnect the plug from the power source and/or the battery pack from the power tool before marking any adjustments, changing accessories, or storing power tools. Such preventive safety measures reduce the risk of starting the power tool accidentally.
- Store idle power tools out of the reach of children and do not allow persons unfamiliar with the power tool or these instructions to operate the power tool. Power tools are dangerous in the hands of untrained users.
- Maintain power tools. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the power tool's operation. If damaged, have the power tool repaired before use. Many accidents are caused by poorly maintained power tools.
- Keep cutting tools sharp and clean. Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.

• Use the power tool, accessories and, tool bits etc. in accordance with these instructions, taking into account the working conditions and the work to be performed. Use of the power tool for operations different from those intended could result in a hazardous situation.

## **BATTERY TOOL USE AND CARE**

- **Recharge only with the charger specified by the manufacturer.** A charger that is suitable for one type of battery pack may create a risk of fire when used with another battery pack.
- Use power tools only with specifically designated battery packs. Use of any other battery packs may create a risk of injury and fire.
- When battery pack is not in use, keep it away from other metal objects, such as paper clips, coins, keys, nails, screws or other small metal objects, that can make a connection from one terminal to another. Shorting the battery terminals together may cause burns or a fire.
- Under abusive conditions, liquid may be ejected from the battery; avoid contact. If contact accidentally occurs, flush with water. If liquid contacts eyes, additionally seek medical help. Liquid ejected from the battery may cause irritation or burns.

#### SERVICE

- Have your power tool serviced by a qualified repair person using only identical replacement parts. This will ensure that the safety of the power tool is maintained.
- When servicing a power tool, use only identical replacement parts.
- Follow instructions in the Maintenance section of this manual. Use of unauthorized parts or failure to follow Maintenance instructions may create a risk of shock or injury.

#### SPECIFIC SAFETY RULES FOR CIRCULAR SAW

A DANGER: Keep hands and body away from and to the side of the blade. Contact with blade will result in serious injury.

WARNING: To reduce the risk of injury, check guarding system. It must cover the blade instantly! Hold the saw with both hands. Support and clamp work. Wear eye protection.

A DANGER: Keep hands away from cutting area and the blade. Keep your second hand on the auxiliary handle or motor housing. If both hands are holding the saw, they cannot be cut by the blade.

- **Do not reach underneath the workpiece.** The guard cannot protect you from the blade below the workpiece.
- Adjust the cutting depth to the thickness of the workpiece. Less than a full tooth of the blade should be visible below the workpiece.
- Never hold the piece being cut in your hands or across your leg. Secure the workpiece to a stable platform. It is important to support the work properly to minimize body exposure, blade binding or loss of control.
- Hold the power tool by its insulated gripping surfaces when performing an operation where the cutting tool may contact hidden wiring or its own cord. Contact with a "live" wire will also make exposed metal parts of the tool "live" and shock the operator.
- When ripping, always use a rip fence or straight edge guide (sold separately). This improves the accuracy of cut and reduces the chance of blade binding.
- Always use blades with the correct size and shape of arbor holes. Blades that do not match the mounting hardware of the saw will run erratically, causing loss of control.
- Never use damaged or incorrect blade washers or bolt. The blade washers and bolt were specially designed for your saw for optimum performance and safety of operation.

#### CAUSES AND OPERATOR PREVENTION OF KICKBACK:

- Kickback is a sudden reaction to a pinched, bound or misaligned saw blade, causing an uncontrolled saw to lift up and out of the workpiece toward the operator.
- When the blade is pinched or bound tightly by the kerf closing down, the blade stalls and the motor reaction drives the unit rapidly back toward the operator.
- If the blade becomes twisted or misaligned in the cut, the teeth at the back edge of the blade can dig into the top surface of the wood causing the blade to climb out of the kerf and jump back toward the operator. Kickback is the result of misuse and/or incorrect operating procedures or conditions and can be avoided by taking proper precautions, as given below:
- Maintain a firm grip with both hands on the saw and position your arms to resist kickback forces. Position your body to either side of the blade, but not in line with the blade. Kickback could cause the saw to jump backwards, but kickback forces can be controlled by the operator, if proper precautions are taken.
- When blade is binding or when interrupting a cut for any reason, release the trigger and hold the saw motionless in the material until the blade comes to a complete stop. Never attempt to remove the saw from the work or pull the saw backward while the blade is in motion or kickback may occur. Investigate and take corrective actions to eliminate the cause of blade binding.

- When restarting a saw in the workpiece center the saw blade in the kerf and check that saw teeth are not engaged into the material. If the saw blade is binding, it may walk up or kickback from the work piece as the saw is restarted.
- Support large panels to minimize the risk of blade pinching and kickback. Large panels tend to sag under their own weight. Supports must be placed under the panel on both sides, near the line of cut and near the edge of the panel.
- **Do not use dull or damaged blades.** Unsharpened or improperly set blades produce a narrow kerf, causing excessive friction, blade binding and kickback.
- Blade depth and bevel adjusting locking levers must be tight and secure before making a cut. If the blade adjustment shifts while cutting, it may cause binding and kickback.
- Use extra caution when making a "plunge cut" into existing walls or other blind areas. The protruding blade may cut objects that can cause kickback.
- Check the lower guard for proper closing before each use. Do not operate the saw if the lower guard does not move freely and close instantly. Never clamp or tie the lower guard into the open position. If the saw is accidentally dropped, the lower guard may be bent. Raise the lower blade guard with the retracting handle. Make sure it moves freely and does not touch the blade or any other part, in all angles and depths of cut.
- Check the operation of the lower guard spring. If the guard and the spring are not operating properly, they must be serviced before use. The lower guard may operate sluggishly due to damaged parts, gummy deposits or a build-up of debris.
- Lower guard should be retracted manually only for special cuts such as "plunge cuts" and "compound cuts." Raise the lower blade guard with the retracting handle. As soon as the blade enters the material, the lower guard must be released. For all other sawing, the lower guard should operate automatically.
- Always observe that the lower guard is covering the blade before placing the saw down on a bench or the floor. An unprotected, coasting blade will cause the saw to walk backwards, cutting whatever is in its path. Be aware of the time it takes for the blade to stop after the switch is released.
- When making a plunge cut with the bevel setting other than 90°, ensure that the guide plate of the saw will not shift. While performing the "plunge cut" when the blade bevel setting is not at 90°. Blade A blade shifting sideways will cause binding and likely kick back.
- Use the appropriate riving knife for the blade being used. For the riving knife to work, it must be thicker than the body of the blade, but thinner than the tooth set of the blade.

- Adjust the riving knife as described in this instruction manual. Incorrect spacing, positioning and alignment can make the riving knife ineffective in preventing kickback.
- Always use the riving knife except when plunge cutting. The riving knife must be replaced after plunge cutting. The riving knife causes interference during plunge cutting and can create kickback.
- For the riving knife to work, it must be engaged in the workpiece. The riving knife is ineffective in preventing kickback during short cuts.
- **Do not operate the saw if riving the knife is bent.** Even a slight interference can slow the closing rate of a guard.
- Hold power tool by insulated gripping surfaces when performing an operation where the cutting tool may contact hidden wiring or its own cord. Contact with a "live" wire will also make exposed metal parts of the tool "live" and shock the operator.

## **GLOSSARY OF WOODWORKING TERMS**

#### Spindle

The shaft on which a blade or cutting tool is mounted. Also called the Arbor.

#### **Revolutions Per Minute (RPM)**

The number of turns completed by a spinning object in one minute.

#### Saw Blade Path

The area over, under, behind or in front of the blade, as it applies to the workpiece. That area which will be or has been cut by the blade.

#### Set

The distance that the saw blade tooth is bent (or set) outward from the face of the blade.

#### Miter Cut

A cutting operation made with the blade at any angle other than 900 to the fence.

Compound Miter Cut A compound miter cut is a cut made using a miter angle and a bevel angle at the same time.

#### Cross cut

A cutting or shaping operation made against the grain of the workpiece.

#### **Bevel Cut**

A cutting operation made with the blade at any angle other than 900 to the miter table.

#### Dado Cut

A non-through cut which produces a square-sided notch or trough in the workpiece (requires special blade).

#### **Chamfer Cut**

A cut removing a wedge from a block of wood so the end (or part of the end) is angled at other than 90°.

#### **Ripping or Rip Cut**

A cutting operation along the length of the workpiece.

#### Freehand Cut

Performing a cut without using a fence, miter gauge, fixture, work clamp, or otherproper device to keep the workpiece from twisting or moving during the cut.

#### Through Sawing

Any cutting operation where the blade extends completely through the thickness of the workpiece.

#### **Non-Through Cuts**

Any cutting operation where the blade does not extend completely through the thickness of the workpiece, like a dado cut.

#### Leading End

The end of the workpiece pushed into tool first.

#### Kerf

The material removed by the blade in a through cut or the slot produced by the blade in a non-through or partial cut.

#### Kickback

A hazard that can occur when the blade binds or stalls, throwing the workpiece back toward operator.

#### Workpiece or Material

The item on which the cutting operation is being done. The surfaces of a workpiece are commonly referred to as faces, ends and edges.

#### Gum

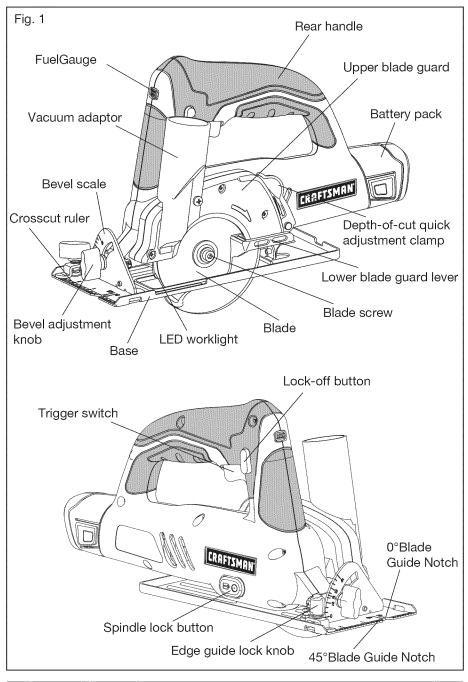
A sticky, sap-based residue from wood products.

#### Resin

A sticky, sap-based substance that has hardened.

#### DESCRIPTION

KNOW YOUR CIRCULAR SAW (Fig. 1)



PRODUCT SPECIFICATIONS			
Motor	12 Volt DC		
No-load Speed	2400 RPM		
Blade Diameter	3-3/8 in. (85.7mm)		
Blade Arbor	15 mm		
Cutting Depth at 90°	15/16 in.		
Cutting Depth at 45°	3/4 in.		
Bevel Angle	Adjustable 0°-45°		
Tool weight	3.83 lbs (without battery)		
Battery type	Lithium-ion		
Battery Voltage	12V DC		
Charging Adaptor Input	120-Volts , 60Hz AC only		
Optimum charging temperature	32°F (0°C) - 104°F (40°C).		

#### UPPER AND LOWER BLADE GUARD WITH ANTI-SNAG FEATURE

Heavy-duty, lightweight blade guards provide protection from the blade. The selfretracting lower blade guard features an anti-snag design for more efficient cutting.

#### **ELECTRIC BRAKE**

The saw has an electric brake to quickly stop the blade from rotating.

#### 0° TO 45° BEVEL ADJUSTMENT

The bevel adjustment lever allows you to set the circular saw for bevel cuts from  $0^{\circ}$  to  $45^{\circ}$ .

#### LED WORKLIGHT

The LED worklight, located on the front of the saw, allows better cut-line visibility.

#### INTEGRATED RIP AND CROSSCUT RULER

The base has integrated rip and crosscut rulers for quick reference when making repetitive cuts.

#### ENLARGED SPINDLE LOCK BUTTON

The spindle lock button allows you to secure the blade when turning the blade screw.

#### LOCK-OFF BUTTON

The lock-off button reduces the possibility of accidental starting. The button can be used on either the left or right of the trigger switch.

#### DEPTH-OF-CUT QUICK ADJUSTMENT CLAMP

The depth-of-cut quick adjustment clamp adjusts the depth of cut a maximum of 0 to 15/16 in. at 90° and 0 to 3/4 in. at 45°.

## ASSEMBLY

**A** WARNING: If any part is broken or missing, do not attempt to attach the battery or operate the saw until the broken or missing part is replaced. Failure to do so could result in possibly serious injury.

**WARNING:** Do not attempt to modify this saw or create accessories not recommended for use with this saw. Any such alteration or modification is misuse and could result in a hazardous condition leading to possible serious injury.

**A** WARNING: To prevent accidental starting that could cause serious personal injury, always remove the battery pack from the saw when assembling parts.

#### UNPACKING

This product has been shipped completely assembled.

- Carefully remove the tool and any accessories from the box. Make sure that all items listed in the packing list are included.
- Inspect the tool carefully to make sure no breakage or damage occurred during shipping.
- Do not discard the packing material until you have carefully inspected and satisfactorily operated the tool.
- If any parts are damaged or missing, please refer to the numbers listed on the back page of this operator's manual.

#### PACKING LIST

Circular saw, blade (installed on the saw), hex wrench, vacuum adapter, screw, operator's manual

## OPERATION

#### LOW-BATTERY CAPACITY INDICATOR

If the FuelGauge shines red when the trigger switch on the saw is depressed, the battery pack power has run out, and the battery pack should be recharged.

Unlike other battery-pack types, Lithium-Ion battery packs deliver fade-free power for their entire run time. The tool will not experience a slow, gradual loss of power as you work. To signal that the battery pack is at the end of its run time and needs to be charged, the power to the tool will drop quickly.

**NOTE:** The LED may also flash due to an overload or high temperature (see BATTERY PROTECTION).

#### **BATTERY PROTECTION**

The battery circuitry protects the battery pack from extreme temperature, overdischarge, and over-charge. To protect the battery from damage and prolong its life, the battery pack circuitry will turn off the battery pack if it becomes overloaded or if the temperature becomes too high during use. This may happen in extremely high-torque, binding, and stalling situations. This intelligent system will shut down your battery pack if its operating temperature exceeds 176°F (80°C) and will begin normal operation when it returns to 32°F (0°C) - 104°F (40°C).

The LED light will begin to flash slowly if the battery circuitry detects a momentary overload.

**NOTE:** A significantly reduced run time after fully charging the battery pack indicates that the battery is near the end of its usable life and must be replaced.

#### COLD WEATHER OPERATION

This Lithium-Ion battery pack will provide optimal performance in temperatures between 32°F (0°C) and 104°F (40°C). When the battery pack is very cold, it may "pulse" for the first minute of use to warm itself. Put the battery pack on a tool and use the tool in a light application. After about a minute, the battery pack will have warmed itself and will operate normally.

#### WHEN TO CHARGE THE BATTERY PACK

It is not necessary to run down the battery pack charge before recharging. The Lithium-Ion battery can be charged at any time and will not develop a "memory" when charged after only a partial discharge.

Remove the battery pack from the tool when convenient for you and your job. "Top off" the battery pack charge by charging it for a time before starting a big job or a long period of use.

Due to Lithium-Ion fade-free properties, the only time it is necessary to charge the Lithium-Ion battery pack is when the pack has reached the end of its charge. To signal the end of charge, power to the tool will drop quickly, or the FuelGauge feature on tools so equipped will indicate diminishing and depleted battery power. Charge the battery pack as needed.

#### FuelGauge (Fig.14)

This tool is equipped with a FuelGauge which indicates the battery-pack charge level.

The green LED on the FuelGauge indicates that the battery is fully charged.

The orange LED on the FuelGauge indicates that the battery has used approximately one half of its charge.

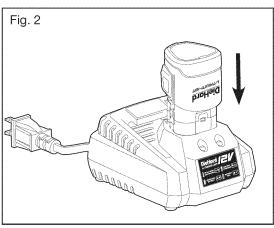
The red LED on the FuelGauge indicates the battery pack is depleted and needs to be charged.

## HOW TO CHARGE THE BATTERY PACK

**NOTE:** This Lithium-Ion battery pack is shipped partially charged. Before using it the first time, fully charge the battery pack.

A fully discharged battery pack will charge in about 30 minutes in a surrounding temperature between 32°F (0°C) and 104°F (40°C).

- 1. Charge the Lithium-Ion battery pack with the correct charger.
- 2. Connect the charger to a power supply.
- 3. Align the raised ribs of the battery pack with the slot in the charger.
- 4. Insert the battery pack into the charger (Fig. 2).
- 5. The charger will communicate with the battery pack to evaluate the condition of the battery pack.
- The green light will flash while the battery pack is charging. After charging is complete, the green LED on the charger will be on. The flickering red light indicates a defective battery or a bad connection between the battery and the charger.



7. The battery pack will fully charge if left on the charger, but it will not overcharge.

**NOTE:** For your convenience, the charger can operate with most generators and inverters rated at 300 watts or higher.

## LED FUNCTIONS OF CHARGER (Fig. 3)

LED INDICATOR	BATTERY PACK	RED LED	GREEN LED	ACTION
HI/LO TEMP. (SEE MANUAL)	Hot/Cold battery	On	Off	Charging will begin when battery returns to 32°F (0°C)-104°F (40°C)
	Defective	Flashing	Off	Battery pack or Charger/Adapter is defective
	Charging	Off	Flashing	Charging
	Fully charged	Off	On	Charging is complete

#### CHARGING A HOT BATTERY PACK

If the battery pack is above normal temperature range, the red LED will illuminate and the green LED will be off. When the battery pack cools down to approximately 104°F (40°C), the charger will automatically begin charging.

#### CHARGING A COLD BATTERY PACK

If the battery pack is below the normal temperature range, the red LED will illuminate and the green LED will be off. When the battery warms to a temperature of more than  $32^{\circ}F$  (0°C), the charger will automatically begin charging.

#### **DEFECTIVE BATTERY**

If the charger detects a problem, the red LED will begin flashing and the green LED will be off.

- 1. If registering as defective, remove and reinsert the battery pack in the charger. If the LED status reads "defective" a second time, try charging a different battery pack.
- 2. If a different battery pack charges normally, dispose of the defective battery pack (see Maintenance section).
- 3. If a different battery pack also indicates "defective," the charger may be defective.

#### BATTERY CHARGING

If the battery pack is being charged within a normal surrounding temperature range (32 °F to 104°F), the green LED will begin flashing and the red LED will be off. The battery pack will reach a full charge in 30 minutes.

#### **BATTERY FULL**

If the battery pack is within normal temperature range, the green LED will illuminate and the red LED will be off. The battery pack is fully charged and ready to use. The battery pack will fully charge, but will not overcharge, if left on the charger.

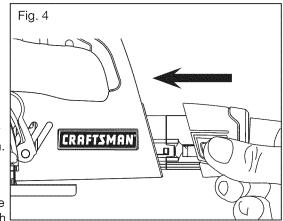
**NOTE:** Charger may warm with several continuous charge cycles. This is part of the normal operation of the charger. Charge in a well-ventilated area.

### TO ATTACH BATTERY PACK (Fig.4)

- Align the raised rib on the battery pack with the grooves of the saw, and then attach the battery pack to the saw.
- Make sure the latch on the battery pack snaps unto place and the battery pack is secured to the saw before beginning operation.

#### TO DETACH BATTERY PACK (Fig. 4)

 Depress the battery release buttons located on the both sides of the battery pack to release the battery pack.



2. Pull the battery pack out and remove it from the tool.

**A CAUTION:** when placing the battery pack in the tool, be sure that the raised rib on the battery pack aligns with the groove inside the saw and that the latches snap into place properly. Improper assembly of the battery pack can cause damage to internal components.

#### SAW BLADES

The best of saw blades will not cut efficiently if they are not kept clean, sharp and properly set.

Using a dull blade will place a heavy load on the saw and increase the danger of kickback. Keep extra blades on hand, so that sharp blades are always available.

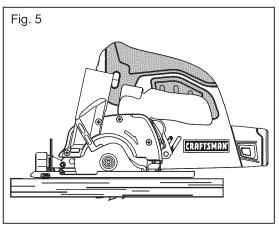
Gum and wood pitch hardened on the blades will slow the saw down. Use gum and pitch remover, hot water or kerosene to remove these accumulations. DO NOT USE GASOLINE.

**WARNING:** A blade diameter of 3-3/8 in. is the maximum blade capacity of your saw. A blade diameter greater than 3-3/8 in. will come in contact with the blade guards. Never use a blade that is so thick that it prevents the outer blade washer from engaging with the flat side of the spindle. Blades that are too large or too thick can result in an accident causing serious injury.

## BLADE GUARD SYSTEM (Fig. 5)

The lower blade guard attached to your circular saw is there for your protection and safety. It should never be altered for any reason. If it becomes damaged or begins to return slowly or sluggishly, do not operate your saw until the blade guard has been repaired or replaced. Always leave the guard in its correct operating position when using the saw.

**A** DANGER: When sawing through a workpiece, the lower blade guard does not cover

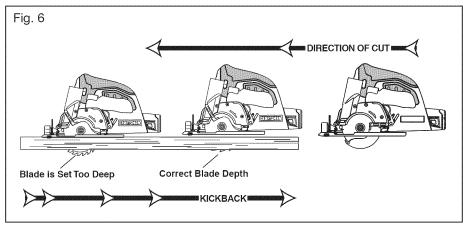


the blade on the underside of the workpiece. Since the blade is exposed on the underside of the workpiece, keep hands and fingers away from the cutting area. Any part of your body coming in contact with a moving blade will result in serious injury.

**A CAUTION:** Never use the saw when the guard is not operating properly. The guard should be checked for correct operation before each use. If you drop your saw, check that the lower blade guard and bumper for damage at all depth settings before using.

**WARNING:** When using the saw, always stay alert and exercise control. Do not remove the saw from the workpiece while the blade is moving.

#### KICKBACK (Fig.6)

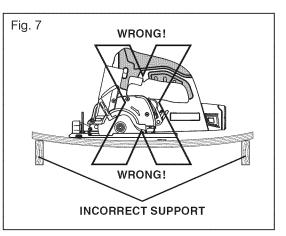


Kickback occurs when the blade stalls rapidly and the saw is driven back towards you. Blade stalling is caused by any action which pinches the blade in the wood. To avoid kickback, release the trigger switch immediately if blade binds or saw stalls. Kickback could cause you to lose control of the saw.

Loss of control can lead to serious injury.

#### To guard against kickback, avoid dangerous practices, such as the following:

- 1. Setting blade depth incorrectly. See next page for correct setting.
- 2. Sawing into knots or nails in the workpiece.
- 3. Twisting the blade while making a cut.
- Making a cut with a dull, gummed up or improperly set blade.
- 5. Supporting the workpiece incorrectly (Fig. 7).
- 6. Forcing a cut.
- 7. Cutting warped or wet lumber.
- 8. Operating the tool incorrectly or misusing the tool.
- 9. Attempting to cut with blade at less than full speed

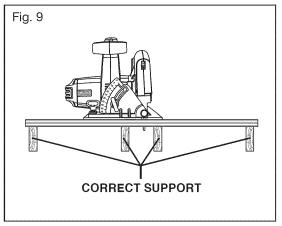


**WARNING:** If the blade comes in contact with the workpiece before it reaches full speed, it could cause the saw to "kickback" towards you, which could result in serious injury.

## To lessen the chance of kickback:

- Keep the blade at the correct depth setting. The depth setting should not exceed 1/4-inch below the material being cut (Fig. 8).
- 2. Inspect the workpiece for knots or nails before cutting. Never saw into a knot or nail.
- Make straight cuts. Always use a straight edge guide (sold separately) when rip cutting. This helps prevent twisting of the blade.
- Use clean, sharp and properly set blades. Never make cuts with dull blades.
- 5. Support the workpiece properly before beginning a cut (Fig. 9).
- 6. Use steady, even pressure when making a cut. Never force a cut.
- 7. Do not cut warped or wet lumber.
- Hold the saw firmly with both hands and keep your body in a balanced position

Fig. 8 Correct blade depth setting is 1/4-in. maximum or less on underside of workpiece



so as to resist the forces if kickback should occur.

**WARNING:** To avoid kickback, release the trigger switch immediately if blade binds or saw stalls. Kickback could cause you to lose control of the saw. Loss of control can lead to serious injury.

## LOCK-OFF BUTTON (Fig. 10)

The lock-off button reduces the possibility of accidental starting. The lock-off button is located on the handle above the trigger switch. The lock-off button must be depressed before you pull the trigger switch.

**NOTE:** The lock-off can be operated from either the left or right side.

## STARTING/STOPPING THE SAW (Fig. 10)

#### To start the saw:

- 1. Depress the lock-off button.
- 2. Depress the trigger switch. Always let the blade reach full speed, then guide the saw into the workpiece.

#### To stop the saw:

1. Release the trigger switch.

After you release the trigger switch, allow the blade to come to a complete stop. **Do not remove the saw from the workpiece while the blade is moving.** 

## ELECTRIC BRAKE

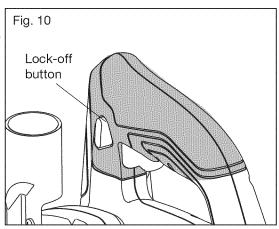
The saw has an electric brake to quickly stop the blade from rotating. The electric brake engages when the trigger switch is released. When the brake is functioning properly, sparks may be visible through the vent slots in the motor housing. This is normal and is the action of the brake.

**NOTE:** If the electric brake repeatedly fails to quickly stop the blade rotation, the saw should be repaired by a qualified service technician at Sears Service Center.

**WARNING:** Always remove the battery pack from the tool when assembling parts, changing blade and making adjustments. Failure to obey this warning could cause serious personal injury.

#### **DEPTH-OF-CUT ADJUSTMENT**

Always use the correct blade-depth setting. The correct blade-depth setting for all cuts should not be more than 1/4-inch below the material being cut. Allowing more depth will increase the chance of kickback and cause the cut to be rough. Your saw is equipped with a depth-of-cut scale that provides increased depth-of-cut accuracy.



## TO ADJUST BLADE DEPTH (Fig. 11)

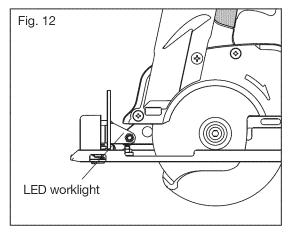
- 1. Remove battery pack from the saw.
- 2. Loosen the depth-of-cut quick adjustment clamp.
- Hold the base flat against the workpiece and raise or lower the saw until the indicator aligns with the desired depth on the scale.

**NOTE:** The scale may be tight; you can adjust the bevel adjustment knob to loosen it. Take care not to make the depth-of-cut quick adjustment clamp too loose.

4. Tighten the depth-of-cut quick adjustment clamp securely.

#### USING THE LED WORKLIGHT (Fig. 12)

The saw is equipped with a fixed-position worklight for better visibility when cutting. The LED worklight will turn on when the trigger switch is depressed. The LED worklight will turn off when the trigger switch is released. This provides additional lighting on Fig. 11 Depth-of-cut quick adjustment clamp



the surface of the workpiece for operation in lower-light areas.

**WARNING:** The worklight aids in illuminating the cut-line. It is not a substitute for adequate work area lighting. Failure to obey this warning could cause serious personal injury.

## VACUUM ADAPTER (Fig.13)

Always connect the vacuum adapter to the saw when sawing, whether it is attached to a vacuum or not.

Remove the battery pack from the saw before mounting the vacuum adapter.

- Align the groove on the adaptor with the rib on the saw.
- 2. Put the adapter onto the rib.
- 3. Tighten the adapter by turning the screw clockwise.
- 4. To improve dust extraction from the working area, connect the adapter to a suitable vacuum cleaner.

#### FuelGauge (Fig.14)

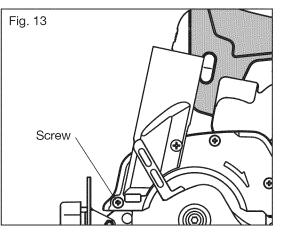
This tool is equipped with a FuelGauge which indicates the battery pack charge level.

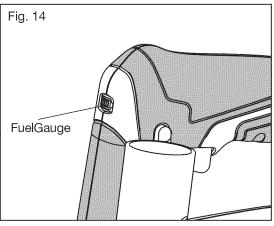
The green LED on the FuelGauge indicates that the battery is fully charged.

The orange LED on the FuelGauge indicates that the

battery has used approximately one half of its charge.

The red LED on the FuelGauge indicates the battery pack is depleted and needs to be charged.



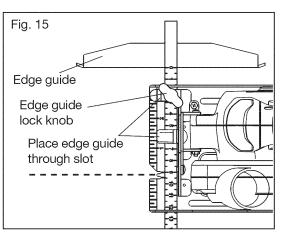


## USING EDGE GUIDE (sold separately) (Fig. 15)

Always use a guide when making long or wide rip cuts with your saw. You can use either a straight edge or use an edge guide (sold separately).

**NOTE:** The edge guide can be used on the left or right side of the blade. (Fig. 15)

**WARNING:** Always remove the battery pack from the tool when assembling parts, changing blades and making adjustments. Failure to obey this warning could cause serious personal injury.



- 1. Remove the battery pack from the saw.
- 2. Position the edge guide (sold separately) so that the arm with the ruler side is facing up. Slide the arm of the edge guide through the mounting slots at the front of the saw base.
- 3. Adjust the edge guide to the desired width of cut.
- 4. Tighten the edge guidelock knob.

**WARNING:** Always securely clamp and support the workpiece. Always maintain proper control of the saw. Failure to clamp and support the workpiece and loss of control of the saw could result in serious injury.

5. When using an edge guide, position the face of the edge guide firmly against the edge of the workpiece. This will help make a true cut without binding the blade. The edge of the workpiece must be straight for the cut to be straight. Use caution to prevent the blade from binding in the cut.

**NOTE:** Do not bind the blade in the cut. It could cause the saw to "kickback" towards you, which could result in serious injury.

**WARNING:** If the blade comes in contact with the workpiece before it reaches full speed, it could cause the saw to "kickback" towards you, which could result in serious injury.

## **OPERATING THE SAW**

It is important to understand the correct method for operating the saw. Refer to the instructions in this section to learn the correct and incorrect ways for handling the saw. **DANGER:** When lifting the saw from the workpiece, the blade is exposed on the underside of the saw until the lower blade guard closes. Make sure that the lower blade guard is closed before setting the saw down.

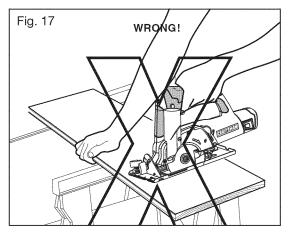
**A** WARNING: To make sawing easier and safer, always maintain proper control of the saw. Loss of control could cause an accident resulting in possibly serious injury.

#### To make the best possible cut (Fig. 16-Fig. 17):

- 1. Hold the saw firmly.
- 2. Avoid placing your hand on the workpiece while making a cut (Fig. 17).
- Support the workpiece so that you are always standing to one side of the cut (kerf).
- 4. Support the workpiece near the cut.
- 5. Clamp the workpiece securely so that the workpiece will not move during the cut.
- Always place the saw weight on the side of workpiece that is supported, not on the side that will fall off when the cut is completed.
- 7. Place the workpiece with the "good" side down.

**NOTE:** The "good" side of the workpiece is the side where appearance is important.

 Draw a guideline along the desired line of cut before beginning your cut. Fig. 16



**NOTE:** Do not touch the blade to the workpiece until the saw has reached maximum speed.

**WARNING:** If the blade comes in contact with the workpiece before it reaches full speed, it could cause the saw to "kickback" towards you, which could result in serious injury.

**WARNING:** Always securely clamp and support the workpiece. Always maintain proper control of the saw. Failure to clamp and support the workpiece and loss of control of the saw could result in serious injury.

## INTEGRATED CROSSCUT RULERS

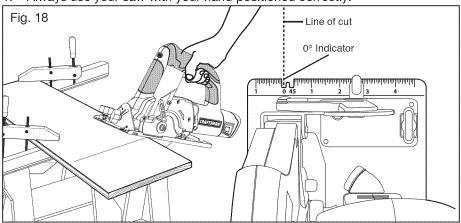
Marked along the base across the front of the saw is a ruler for measuring repetitive cuts. It is marked 1-inch to the left of the  $0^{\circ}$  and 2-1/2 inches to the right of  $0^{\circ}$  in 1/8-inch increments.

A ruler for measuring length of cuts is marked along the left side of the base. It is marked 0 to 8 inches in 1/8-inch increments.

**NOTE:** The distance from the line of cut to the guideline is the amount you should offset the guide.

## MAKING CROSS CUTS AND RIP CUTS (Fig. 18)

1. Always use your saw with your hand positioned correctly.



- 2. When making cross or rip cuts, align your line of cut with the right side of the notch by the 0° indicator.
- 3. Because the thicknesses of blades vary, make a trial cut in scrap material along the guideline to determine how much, if any, you should offset the blade from the guideline to allow for the kerf of the blade to get an accurate cut.

**WARNING:** If the blade comes in contact with the workpiece before it reaches full speed, it could cause the saw to "kickback" towards you, which could result in serious injury.

**NOTE:** Do not bind the blade in the cut. It could cause the saw to "kickback" towards you, which could result in serious injury.

### MAKING RIP CUTS

Always use a guide when making long or wide rip cuts with your saw. You can use either a straight edge or use the edge guide (sold separately).

- 1. Secure the workpiece.
- 2. Clamp a straight edge to the workpiece using C-clamps.
- 3. Carefully guide the saw along the straight edge to achieve a straight rip cut.

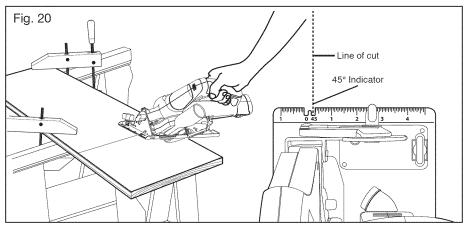
**WARNING:** Always securely clamp and support the workpiece. Always maintain proper control of the saw. Failure to clamp and support the workpiece and loss of control of saw could result in serious injury.

#### TO ADJUST BEVELSETTING (Fig. 19)

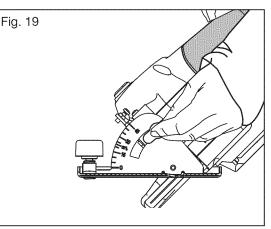
- 1. Remove battery pack from the saw.
- 2. Loosen the bevel adjustment lever.
- Raise the motor housing end of the saw to the desired angle setting on the bevel scale.
- 4. Tighten the adjustment lever securely.

#### MAKING A BEVEL CUT (Fig. 20)

**WARNING:** Always securely clamp and support the workpiece. Always maintain proper control of the saw. Failure to clamp and support the workpiece and loss of control of the saw could result in serious injury.



1. Your saw can be adjusted to cut at any angle between 0° and 45°.



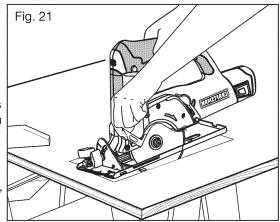
- There is a notch in the saw base to help you line up the blade with the line of cut when making 45° bevel cuts, Align your line of cut with the left side of the notch by the 45° indicator.
- Because blade thicknesses vary and different angles require different settings, make a trial cut in scrap material along the guideline to determine how much, if any, you should offset the blade from the guideline to allow for the kerf of the blade to get an accurate cut.
- 4. When making a bevel cut, hold the saw firmly with both hands.
- 5. Rest the front edge of the base on the workpiece, then depress the lock-off button and squeeze the trigger switch to start the saw.
- 6. Always allow the blade to reach full speed, and then guide the saw into the workpiece.
- 7. After completing your cut, release the trigger switch and allow the blade to come to a complete stop in the cut. Do not remove the saw from the workpiece while the blade is moving. It will damage your bevel cut and cause Kickback.

**A** WARNING: If the blade comes in contact with the workpiece before it reaches full speed, it could cause the saw to kickback towards you, possibly resulting in serious injury.

### MAKING A POCKET CUT (Fig. 21)

WARNING: Always adjust the bevel setting to zero before making a pocket cut. Attempting a pocket cut at any other setting can result in a loss of control of the saw, which can result in serious injury.

 Adjust the bevel setting to zero, set the blade to the correct blade depth setting, then use the lower blade guard lever to swing the guard up.



**WARNING:** Always raise the lower blade guard with the lever to avoid serious injury.

- 2. While holding the lower blade guard up by the lever, firmly rest the front of the saw base flat against the workpiece with the rear handle raised so the blade does not touch the workpiece.
- 3. Depress the lock-off button and squeeze the trigger switch to start the saw. Always let the blade reach full speed, and then slowly lower the blade onto the workpiece until the base is flat against the workpiece. As the blade enters the material, you must release the lower blade guard lever.

4. After you complete the cut, release the trigger switch and allow the blade to come to a complete stop. After the blade has stopped, remove it from the workpiece. If the corners of your pocket cut are not completely cut through, use a hand finishing saw to finish the corners.

**WARNING:** Never tie the lower blade guard in the raised position. Leaving the blade exposed could result in serious injury.

## MAINTENANCE

**A** WARNING: When servicing, use only identical Craftsman replacement parts. Use of any other parts may create a hazard or cause product damage.

**WARNING:** Always wear safety goggles or safety glasses with side shields when using compressed air to clean tool. If the operation is dusty, also wear a dust mask.

**A** WARNING: To avoid serious personal injury, always remove the battery pack from the tool when cleaning or performing any maintenance.

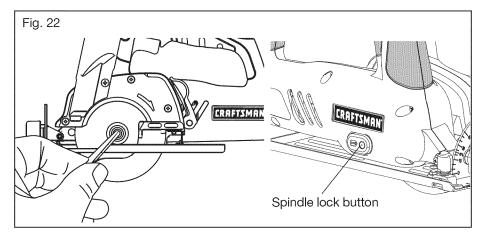
#### **GENERAL MAINTENANCE**

Avoid using solvents when cleaning plastic parts. Most plastics are susceptible to damage from various types of commercial solvents and may be damaged by their use. Use clean cloths to remove dirt, dust, oil, grease, etc.

**WARNING:** Do not at any time let brake fluids, gasoline, petroleum-based products, penetrating oils, etc. come in contact with plastic parts. Chemicals can damage, weaken or destroy plastic which may result in serious personal injury.

Only the parts shown in the parts list are intended to be repaired or replaced by the customer. All other parts should be replaced at a Sears Service Center.

#### CHANGING THE BLADE (Fig. 22)



**A** WARNING: Be sure to wear protective work gloves while handling a saw blade. The blade can injure unprotected hands.

- 1. Remove the battery pack from the saw.
- 2. Loosen the depth-of-cut adjustment lever. Raise the saw to its maximum height and tighten the depth-of-cut adjustment lever. This practice permits easier access to the blade mounting.
- 3. Locate and remove the hex key from the storage area.
- 4. Depress the spindle lock button and place the hex key in the blade screw and move it back and forth until you feel the spindle lock button depress further. This action locks the blade in position so that the blade screw can be removed.
- 5. With the spindle lock button firmly depressed, turn the blade screw clockwise to loosen it.
- 6. Raise the lower blade guard using the blade guard lever and hold it in the raised position.
- 7. Remove the blade screw and the outer blade washer and the blade.
- 8. The remaining washer is the inner bushing washer that fits around the spindle shaft and does not need to be removed.
- 9. Put a drop of good-quality machine oil onto the inner bushing washer and outer blade washer where they will contact the blade.
- 10. Place a new saw blade inside the lower blade guard, onto the spindle shaft and against the inner bushing washer.

NOTE: The teeth of the blade should point upward at the front of the saw.

- 11. Replace outer blade washer.
- 12. Depress and hold spindle lock button as you replace the blade screw and hand tighten the screw in a counterclockwise direction. Use the hex key to tighten the blade screw securely.
- 13. Return hex key into the storage area.

**NOTE:** Never use a blade that is too thick to allow the outer blade washer to engage with the flat side of the spindle.

## BATTERIES:

The battery pack is equipped with Lithium-Ion rechargeable batteries. The duration of use from each charge will depend on the type of work performed.

The batteries in this tool have been designed to provide maximum troublefree life. Like all batteries, they will eventually wear out. Do not disassemble the battery pack or attempt to replace the batteries. Handling of the batteries, especially when wearing rings and jewelry, could result in a serious burn.

To obtain the longest possible battery life, read and understand the operator's manual.

• It is good practice to unplug the Charger and remove the Lithium-Ion battery pack when not in use.

For Lithium-Ion battery pack storage longer than 30 days:

• Store the Lithium-Ion battery pack where the temperature is below 80°F (26°C) and free of moisture.

- Store Lithium-Ion battery packs in a 30%-50% charged condition.
- Every six months of storage, fully charge the Lithium-Ion battery pack.
- Exterior may be cleaned with a cloth or soft non-metallic brush.

## BATTERY PACK REMOVAL AND PREPARATION FOR RECYCLING

To preserve natural resources, please recycle or dispose of batteries properly. This product contains lithium-ion batteries. Local, state or federal laws may prohibit disposal of lithium-ion batteries in ordinary trash. Consult your local waste authority for information regarding available recycling and/or disposal options.

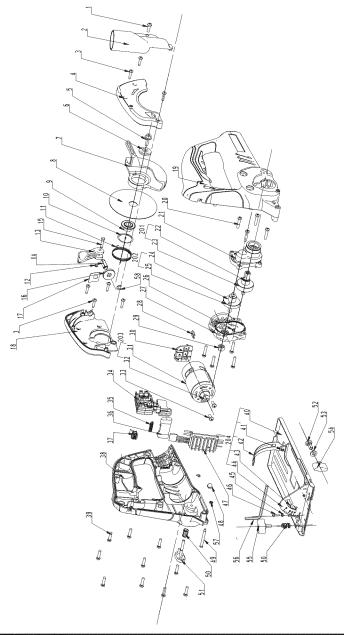


A WARNING: Upon removal, cover the battery pack's terminals with heavy-duty adhesive tape. Do not attempt to destroy or disassemble battery pack or remove any of its components. Lithium-ion batteries must be recycled or disposed of properly. Also, never touch Keep away from children. Failure to comply with these warnings could result in fire and/or serious injury.

TROUBLESHOOTING			
PROBLEM	CAUSE	SOLUTION	
The circular saw	Battery pack is depleted	Charge the battery pack	
does not work	The battery pack is not installed	Install a charged battery pack	
The blade does not follow a straight line	Teeth are dull. This is caused by hitting a hard object such as a nail, dulling teeth on one side. The blade tends to cut to the side with the sharpest teeth.	Change to a new sharp blade	
	Edge guide or straight edge is not being used.	Use an edge guide or straight edge	
The blade binds or smokes from	Blade is dull.	Change to a new sharp blade	
friction	Blade is on backwards.	Install the blade correctly	
	Blade is bent.	Replace with a new blade	
	Workpiece is not properly supported.	Clamp the workpiece correctly and tightly	
	Incorrect blade is being used.	Use the correct blade	

## 12.0-VOLT LITHIUM-ION CORDLESS 3-3/8-in. CIRCULAR SAW MODEL NO. 320.61325

The Model Number will be found on the Nameplate attached to the handle of the circular saw. Always mention the Model Number when ordering parts for this tool.



## PARTS LIST

## 12.0-VOLT LITHIUM-ION CORDLESS 3-3/8-in. CIRCULAR SAW MODEL NO. 320.61325

The Model Number will be found on the Nameplate attached to the handle of the circular saw. Always mention the Model Number when ordering parts for this tool.

No	Part No	Part Name	QTY
1	5620041000	Screw	1
2	3125169000	Vacuum Adapter	1
3	5610024000	Tapping Screw	7
4	3402418000	Upper Guard	1
5	5620425000	Flange Screw	1
6	3704673000	Outer Flange	1
7	3125170000	Lower Guard	1
8	3810474000	Blade	1
9	3520509000	Inner Flange	1
10	3650115000	Circlips For Shaft	1
11	3660429000	Torsion Spring	1
12	5660001000	E Ring	2
13	3125173000	Lock Lever	1
14	3551457000	Shaft	1
15	3551441000	Pin	1
16	5630242000	Round Nut	1
17	5650339000	Washer	1
18	3125174000	Upper Guard	1
19	3320987000	Left Housing	1
20	5610106000	Tapping Screw	8
21	3402417000	Gear Case Cover	1
201	2822832000	Shaft Assembly	1
22	3551434000	Shaft	1
23	3551435000	Gear	1
202	2822831000	Gear Set	1

No	Part No	Part Name	QTY
24	3551436000	Bevel Gear	1
25	3551437000	Gear Shaft	1
26	3520510000	Oil Impreging Bearing	2
27	3402422000	Gear Case	1
28	3704254000	Hand Hoop	1
29	5630243000	Hexagon Nut	1
30	3402298000	Contact Receptacle Assembly	1
203	2822833000	Motor & Gear Assembly	1
31	2730158000	DC Motor	1
32	3551438000	Pinion	1
33	5620039000	Screw	2
34	4870438000	Trigger Switch	1
35	3660075000	Spring	1
36	3125308000	Lock-off Trigger	1
37	3125136000	Light Guide Pole	1
38	3320988000	Right Housing	1
39	5610103000	Tapping Screw	10
204	2822805000	Base Plate Assembly	1
40	3704671000	Base Plate	1
41	5680008000	Rivet	2
42	3704672000	Depth Bracket	1
43	3704675000	Support Plate	1
44	3704674000	Angle Support	1
45	5630189000	Hexagon Nut	1
46	5620033000	Screw	1
47	4890641000	PCB Assembly	1
48	3124378000	LED Cover	1
49	5620427000	Bolt	1
50	3660071000	Spring	2
51	3402419000	Spindle Lock Button	1

No	Part No	Part Name	QTY
52	5640019000	Square Neck Bolt	1
53	5650016000	Plain Washer	1
54	5630241000	Wing Nut	1
55	5640196000	Wing Bolt	1
56	5680031000	Hexagon Wrench	1
57	5630188000	Nut	1
58	5660005000	E Ring	1

## NOTES

## NOTES

## NOTES



Registered Trademark / <sup>™</sup> Trademark of KCD IP, LLC in the United States, or Sears Brands, LLC in other countries
Marca Registrada / <sup>™</sup> Marca de Fábrica de KCD IP, LLC en Estados Unidos, o Sears Brands, LLC in otros países
<sup>™C</sup> Marque de commerce / <sup>™D</sup> Marque déposée de Sears Brands, LLC