

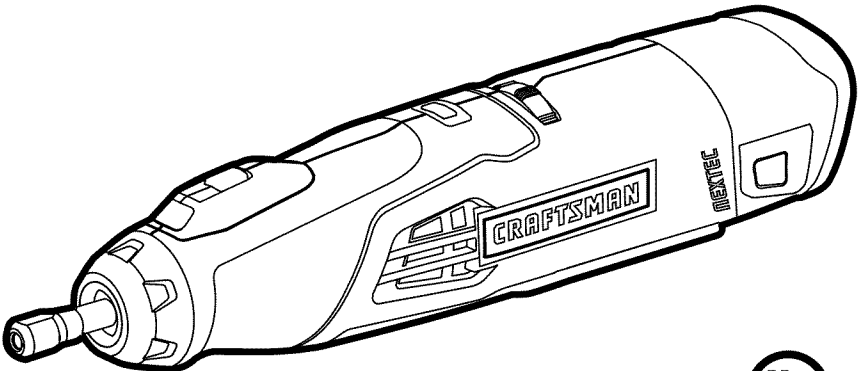
Operator's Manual



NEXTEC

12.0-Volt Lithium-Ion Cordless Rotary Tool

Model No. 320. 31224



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

Charge battery before first use.

- Warranty
- Safety
- Assembly
- Operation
- Maintenance
- Español

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

www.craftsman.com

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CRAFTSMAN ONE YEAR LIMITED WARRANTY

FOR ONE YEAR from the date of purchase, this power tool and, if equipped, battery pack and charger are warranted against any defects in material or workmanship. With proof of purchase, a 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 the application tools, 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

This cordless rotary tool 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.

SAVE THESE INSTRUCTIONS! READ ALL INSTRUCTIONS!

▲ WARNING: Some dust created by using a rotary tool 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 warnings 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 rotary tool. Failure to follow all instructions listed in this manual may result in electric shock, fire and/or serious personal injury.

SYMBOL SIGNAL MEANING

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

⚠ DANGER: Indicates a hazardous situation which, if not avoided, will result in death or serious injury. This signal word is to be limited to the most extreme situations. Always follow the safety precautions to reduce the risk of fire, electric shock, and personal injury.

⚠ WARNING: Indicates a hazardous situation which, if not avoided, could result in death or serious injury. Always follow the safety precautions to reduce the risk of fire, electric shock, and personal injury.

⚠ CAUTION: Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

Damage Prevention and Information Messages

These inform the user of important 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 “NOTICE,” as in the example below:

NOTICE: 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.

⚠ 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 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 more safely.

SYMBOL	NAME	DESIGNATION/EXPLANATION
V	Volts	Voltage
A	Amperes	Current
Hz	Hertz	Frequency (cycles per second)
W	Watt	Power
min	Minutes	Time
	Alternating Current	Type of current
	Direct Current	Type or a characteristic of current
n_0	No Load Speed	Rotational speed, at no load
	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.
	Read The Operator's Manual	To reduce the risk of injury, user must read and understand operator's manual before using this product.
	Eye Protection	Always wear safety goggles or safety glasses with side shields and a full face shield when operating this product.
	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 POWER TOOL SAFETY WARNINGS

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

Save all warnings and instructions for future reference.

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 your work area clean and well lit.** Cluttered or dark areas invite accidents.
- **Do not operate power tools in explosive environments, 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 may 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 grounded power tools.** Unmodified plugs and matching outlets will reduce the risk of electric shock.
- **Avoid body contact with grounded surfaces, such as pipes, radiators, ranges, and refrigerators.** There is an increased risk of electric shock if your body is grounded.
- **Do not expose power tools to rain or wet conditions.** Water entering a power tool will increase the risk of electric shock.
- **Do not abuse the cord. Never use the cord for carrying, pulling, or unplugging the power tool. Keep the 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 ground fault circuit interrupter (GFCI) protected supply.** Use of a (GFCI) reduces the risk of electric shock.

PERSONAL SAFETY

- **Stay alert, watch what you are doing and use common sense when operating a power tool. Do not use the 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 a 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 a power source and/or battery, picking up or carrying the tool.** Carrying power tools with your finger on the switch or energizing 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 jewelry. 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 that 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 from the power tool before making 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 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, tool application tools, 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 chargers specified in this manual.** 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.
- **Use only the battery pack and chargers listed below.**

BATTERY PACK	CHARGER
320.11221	320.10006
	320.14300
	320.29497

- **When the 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, also 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.
- **Follow instructions in the Maintenance section of this manual.** Use of parts not listed in this manual or failure to follow Maintenance instructions may create a risk of shock or injury.

SPECIFIC SAFETY RULES FOR CORDLESS ROTARY TOOL

- **Hold power tools by their 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.
- **Use clamps or other practical way to support and secure the workpiece to a stable platform.** Holding the work by hand or against your body is unstable and may lead to loss of control.
- **Accessories must be rated for at least the speed recommended on the tool warning label.** Wheels and other accessories running over the rated speed can fly apart and cause injury.
- **Disconnect all fuses or circuit breakers feeding the worksite** if cutting into existing walls or other blind areas where electrical wiring may exist is unavoidable.

- **Disconnect the battery pack from the tool or place the switch in the off position before assembly, making any, adjustments or changing accessories.** Such preventive safety measures reduce the risk of starting the rotary tool accidentally.
- **Always hold the hand piece firmly in your hands during the start-up.** The reaction torque of the motor, as it accelerates to full speed, can cause the shaft to twist.
- **Always wear safety goggles and dust mask. Use only in well ventilated area.** Using personal safety devices and working in safe environment reduces risk of injury.
- **After changing the application tools or making any adjustments, make sure that the collet nut and any other adjustment devices are securely tightened.** Loose adjustment devices can unexpectedly shift, causing loss of control. Loose rotating components will be violently thrown.
- **Do not reach in the area of the spinning application tool.** The proximity of the spinning application tool to your hand may not always be obvious.
- **Carefully handle both the rotary tool and individual grinding wheels to avoid chipping or cracking. Install a new wheel if the rotary tool is dropped while grinding. Do not use a wheel that may be damaged.** Fragments from a wheel that bursts during operation will fly away at great velocity, possibly striking you or bystanders.
- **Never use dull or damaged application tools.** Sharp application tools must be handled with care. Damaged application tools can snap during use. Dull application tools require more force to push the rotary tool, possibly causing the application tool to break.
- **Inspect your workpiece before cutting. When cutting irregularly shaped workpieces, plan your work so it will not slip and pinch the application tool, which could cause the tool to be torn from your hand.** For example, when carving wood, make sure that there are no nails or foreign objects in the workpiece. Nails or foreign objects can cause the application tool to jump.
- **Never start the rotary tool when the application tool is engaged in the material. The cutting edge may grab the material.** causing loss of control.
- **Avoid bouncing and snagging the wheel, especially when working corners, sharp edges etc.** This can cause loss of control and kick-back.
- **The direction of feed into the material when carving, routing or cutting is very important. Always feed the application tool into the material in the same direction as the cutting edge is exiting from the material (which is the same direction as the chips are thrown).** Feeding the tool in the wrong direction, causes the cutting edge of the application tool to climb out of the work and pull the rotary tool in the direction of this feed.
- **If the application tool becomes jammed or slows down, turn the rotary tool off with the switch.** Wait for all moving parts to stop and detach the battery pack from the rotary tool, then work to free the jammed material.
- **Do not touch the application tool or collet after use.** The application tool and collet are too hot to be touched with bare hands after use.

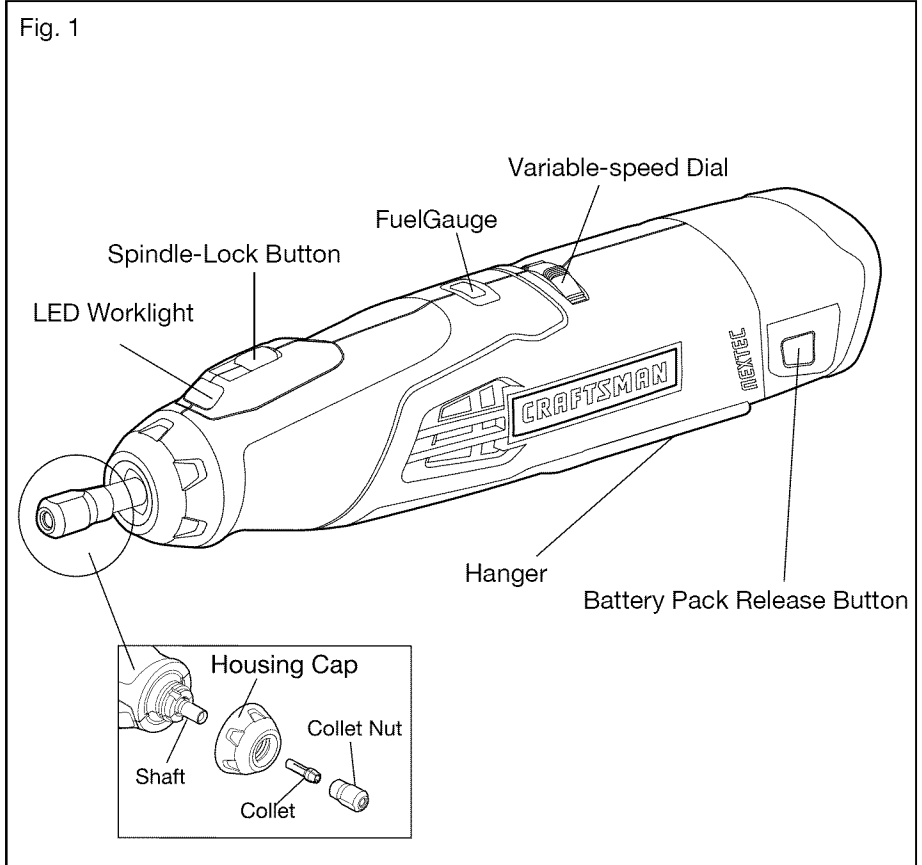
- **Do not grind or sand near flammable materials.** Sparks could ignite these materials.
- **This tool is not intended for use as a dental drill,** in human or veterinary medical applications. Serious personal injury may result.
- **Do not alter or misuse the tool.** Any alteration or modification is a misuse and may result in serious personal injury.
- **When using the steel saws, cutoff wheels high speed cutters or tungsten carbide cutters, always have the work securely clamped. Never attempt to hold the work with one hand while using any of these accessories.** These wheels will grab if they become slightly canted in the groove, and they can kickback causing loss of control resulting in serious injury. Your second hand should be used to steady and guide the hand holding the tool. When a cutoff wheel grabs, the wheel itself usually breaks. When the steel saw, high speed cutters or tungsten carbide cutter grabs, it may jump from the groove and cause lose control
- **The rated speed of the application tools must be at least equal to the maximum speed marked on the rotary tool.** Application tools running faster than their rated speed can break and fly apart.
- **Never lay the rotary tool down until the application tool has come to a complete stop.** The spinning accessory may grab the surface and pull the power tool out of your control.
- **Save these instructions.** Refer to them frequently and use them to instruct others who may use this tool. If you loan someone this tool, also loan them these instructions.



⚠ WARNING: Wear ear protection. Exposure to noise can cause hearing loss.

DESCRIPTION

KNOW YOUR ROTARY TOOL (Fig. 1)



PRODUCT SPECIFICATION	
Motor	12 Volt DC
No-Load Speed	5000-30000 RPM
Collet Capacities	1/8 inch
Tool Weight (Without battery)	0.98 lbs.
Battery Type	Lithium-Ion
Battery Voltage	12 Volt DC
Charger Input	120-Volts, 60Hz AC only
Optimum Charging Temperature	32°F(0°C)-104°F(40°C)

⚠ WARNING: The safe use of this product requires an understanding of the information on the tool and in this operator's manual as well as knowledge of the project you are attempting. Before use of this product, familiarize yourself with all operating features and safety rules.

VARIABLE-SPEED DIAL

The variable-speed dial is located on the top of your tool for selecting the appropriate speed. This allows maximum control for a wide variety of applications.

LED WORKLIGHT

The LED worklight is located in the front of the tool. This feature provides extra light for increased visibility.

FUELGAUGE

The FuelGauge indicates the battery-pack charge level.

ASSEMBLY

⚠ WARNING: If any parts are broken or missing, do not attempt to attach the battery pack to the rotary tool or operate the tool until the broken or missing parts are replaced. Failure to do so could result in serious injury.

⚠ WARNING: Do not attempt to modify this tool or use accessories not recommended for use with this rotary tool. Any such alteration or modification is misuse and could result in a hazardous condition leading to possibly serious injury.

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

UNPACKING


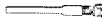
















This product has been shipped completely assembled.

1. Carefully remove the tool and any accessories from the carton. Make sure that all items listed in the packing list are included.
2. Inspect the tool carefully to make sure no breakage or damage occurred during shipping.
3. Do not discard the packing material until you have carefully inspected and satisfactorily operated the tool.
4. If any parts are damaged or missing, please return the product to the place of purchase.

PACKING LIST

Rotary tool, battery pack, 40 pcs application tools (with plastic case), QuickBoost charger and operator's manual.

40-PIECE APPLICATION TOOL KIT (Fig. 1a)

	Steel Brush	1pc		Bristle Brush	1pc
	1-1/4" Cut-Off Wheel	1pc		1-1/4" Reinforced Cut-Off Wheel	1pc
	Cut-Off Wheel (23.8 mm X 0.63 mm)	6 pcs		Cut-Off Wheel (23.8 mm X 1.0 mm)	6 pcs
	Mandrel for cut-off wheels	1pc		1/8" Engraving Cutter	1pc
	1/2" Sanding Drum 60grit	4 pcs		1/2" Sanding Drum 120 grit	4 pcs
	1/2" Drum sander mandrel	1pc		Sanding Disc 180 grit	4 pcs
	Sanding Disc 240 grit	4 pcs		3/8" Silicon Carbide Grinding Stone	1pc
	1/4" Silicon Carbide Grinding Stone	1pc		9/32" Aluminum Oxide Grinding Stone	1pc
	3/16" Aluminum Oxide Grinding Stone	1pc		Wrench	1pc

OPERATION

LOW-BATTERY CAPACITY INDICATOR

- If the FuelGauge shines red when the on/off switch on the rotary tool is activated, 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.

NOTICE: 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, over-discharge, 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 approximately 122°F (50°C). The battery pack will begin normal operation when it cools down.

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

NOTICE: The battery can automatically reset. If the LED continues to flash rapidly, it is indicating that the charge is substantially diminished. Place the battery into the charger for charging. (See BATTERY CAPACITY INDICATOR, above.)

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” that reduces total charge when recharged after a partial discharge.

Remove the battery pack from the tool when it is convenient. “Top off” the battery pack charge by charging it for a time before starting a big job or 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. Charge the battery pack as needed.

TO ATTACH BATTERY PACK (Fig. 2)

1. Make sure that the rotary tool is “OFF”.
2. Align the raised ribs on the battery pack with the grooves on the inside the rotary tool, and then attach the battery pack to the tool.

NOTICE: Make sure that the latch on the battery pack snaps into place and the battery pack is secured to the tool before beginning operation.

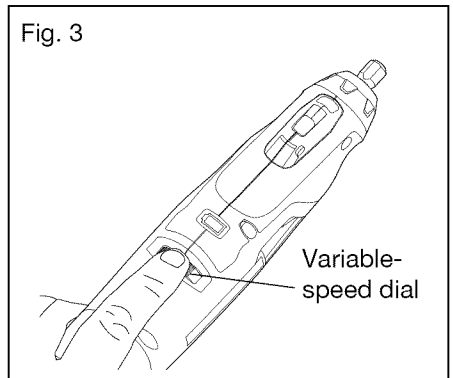
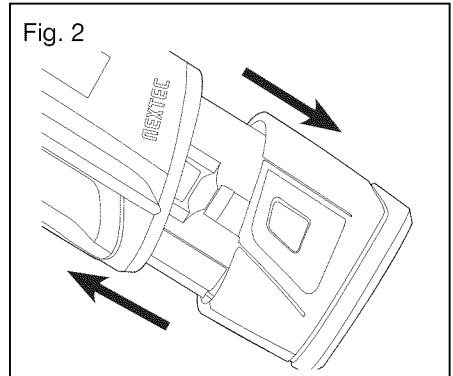
TO DETACH BATTERY PACK (Fig. 2)

1. Make sure that the rotary tool is “OFF”.
2. Depress the battery release buttons located on the both sides of the battery pack to release the battery pack.
3. Pull the battery pack out and remove it from the rotary tool.

⚠ WARNING: Battery tools are always in operating condition; therefore, the on/off switch should always be in the “OFF” position when not in use or carrying the tool at your side.

VARIABLE SPEED DIAL (Fig. 3)

To turn the rotary tool on, rotate the speed dial to the 1, 2, 3, 4, 5, or 6 position. To turn it off, rotate the speed dial to the “0” position. Rotate the speed dial to the “1” position for the lowest speed. Rotate the speed dial to the “6” position for the highest speed.



LED WORKLIGHT (Fig. 4)

The LED worklight, located on the front of the tool, will illuminate when the rotary tool is turned on. This provides additional light on the surface of the workpiece for operation in lower-light conditions.

The LED worklight will turn off when the speed dial is at the “0” position.

NOTICE: To help prevent accidental starting, if the switch is in the ON position when the battery pack is inserted, the LED light will flash to warn the user to turn the tool off.

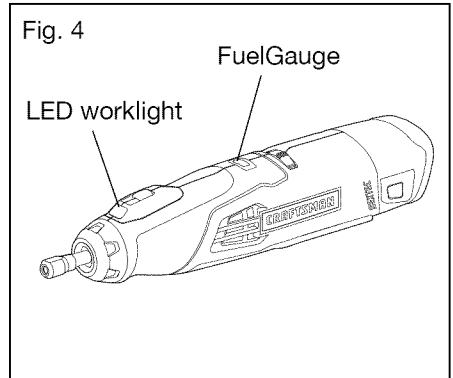
FUELGAUGE (Fig. 4)

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



ATTACHING THE APPLICATION TOOLS

⚠ WARNING: Failure to remove the battery pack from the rotary tool when assembling parts, making adjustments, or changing application tools could result in accidental starting causing possibly serious injury.

⚠ CAUTION: For all work or when changing application tools, always wear protective gloves. The sharp edges of the application tools will cause personal injury. Application tools can be very hot while working.

⚠ WARNING: Check that the application tools are correctly attached. Incorrect or insecurely fastened application tools can come loose during operation and cause a hazard.

A 1/8 inch collet and a collet nut is supplied with this rotary tool.

Additional collets are available separately to permit the rotary tool to be used with 1/32, 1/16, and 3/32 inch shank accessories.

ATTACHING BRUSHES, GRINDING STONES, MANDRELS AND THE ENGRAVING CUTTER:

1. Remove the battery pack from the rotary tool.
2. Press the spindle-lock button and unscrew the collet nut with the collet wrench (Fig. 5).
3. Insert the application tool into the collet as far as it can go (Fig. 6).

NOTICE: Choose the appropriate sized collet for the accessory shank. Do not force the application tool into the collet.

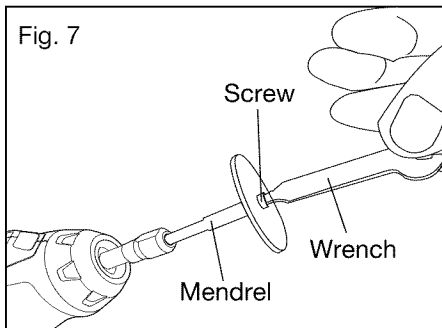
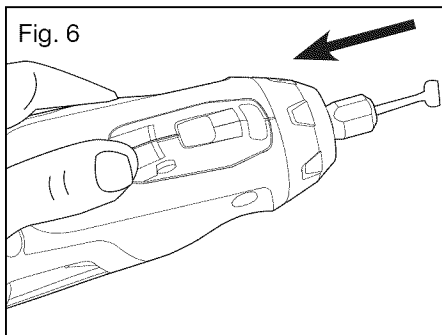
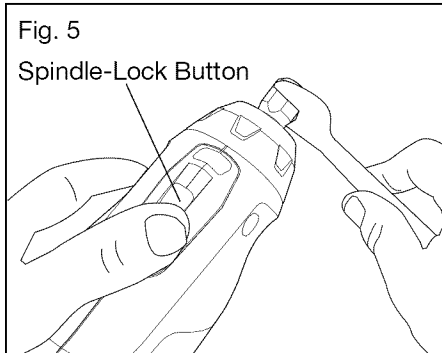
4. Press the spindle-lock button and use the collet wrench to tighten the collet nut until the application tool shank is gripped by the collet.

NOTICE: Avoid excessive tightening of the collet nut when there is no application tool inserted.

⚠ WARNING: Never press the spindle-lock button while the spindle is rotating.

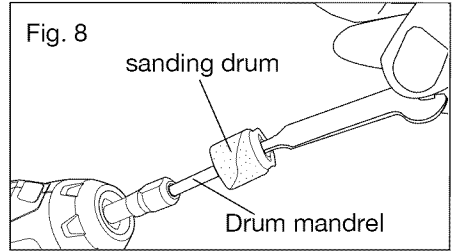
ATTACHING CUTTING WHEEL OR SANDING DISC

1. Remove the battery pack from the rotary tool.
2. Press the spindle-lock button and unscrew the collet nut with the collet wrench (Fig. 5).
3. Insert the cut-off wheel mandrel in the collet chuck and tighten the collet nut with the collet wrench.
4. Remove the screw and spacing washer with the screwdriver incorporated in the wrench handle tip (Fig. 7)
5. Press the spindle-lock button and secure the screw and spacing washer into the mandrel with the with the screwdriver incorporated in the wrench handle tip (do not over tighten) (Fig. 7).



ATTACHING SANDING DRUM

1. Remove the battery pack from the rotary tool.
2. Press the spindle lock button and unscrew the collet nut with the collet wrench (Fig. 5).
3. Insert the sanding drum mandrel in the collet chuck and tighten the collet nut with the collet wrench (Fig. 8).
4. Loosen the small screw in the top of the drum mandrel with the screwdriver incorporated in the wrench handle tip. This will allow the rubber in the mandrel to relax.
5. Slide the sanding drum onto the mandrel.
6. With the spindle lock engaged, tighten the screw with the screwdriver incorporated in the wrench handle tip and the rubber in the mandrel will swell, gripping the sanding drum. (do not over tighten).



HOLDING THE ROTARY TOOL (Figs. 9 and 10)

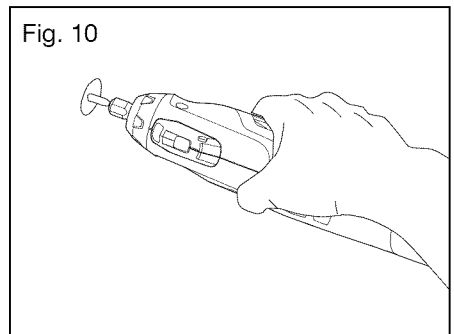
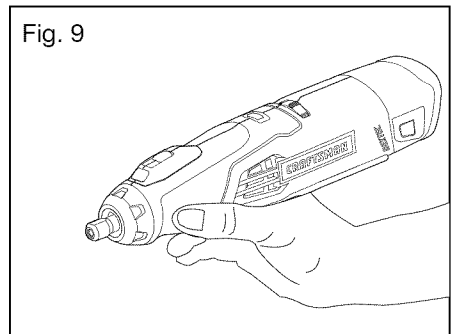
Determine the best grip for your job. The rotary tool can be held like a pencil for fine work, or gripped around the body when less precision is needed.

Practice on scrap material to determine the best speed, the correct application tool, and to get a feel for the job.



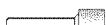




Do not press the application tool into the workpiece. Little or no operator force should be needed when the correct application tool and speed are used. Touch the application tool to the workpiece and guide it over the work, making multiple passes when necessary.









⚠ WARNING: Move the rotary tool in the same direction as the application tool is spinning (as indicated by the arrow near the front of the tool). Moving the tool in the opposite direction can cause the tool to kick back, ending up in loss of control and damage to the workpiece.

⚠ WARNING: Everyone in the area must wear protective clothing and safety goggles or face shields. Damaged accessories may fly apart with considerable force, potentially causing serious injury.



ACCESSORIES APPLICATIONS

Accessory	Speed Setting	Speed Range (RPM)	Information
 3/16" aluminum oxide grinding stone	4-5	17,000-27,000	For sharpening lawn mower blades, screwdriver tips, knives, scissors, chisels and other cutting tools. Use to remove flash from metal castings, deburring any metal after cutting, smoothing welded joints, grinding off rivets and removing rust. These grinding stones can be re-sharpened with a dressing stone.
 9/32" aluminum oxide grinding stone	4-5	17,000-27,000	
 3/8" silicon carbide grinding stone	4-5	17,000-27,000	
 1/4" silicon carbide grinding stone	4-5	17,000-27,000	Tougher than aluminum oxide points, these are made especially for use on hard materials such as glass, stone, ceramics and non-ferrous materials. Typical uses: engraving on glass and removing stilt marks and excess glaze on ceramics and engraving on glass.
 1/8" engraving cutter	5-6	23,000-30,000	High speed cutters are used in carving, cutting and slotting in wood, plastics and soft metals such as aluminum, copper and brass. Use for freehand routing or carving in wood or plastic, and for precision cutting. Made of high quality steel.
 Bristle brush	1-3	5,000-15,000	Use for cleaning, polishing and detailing silverware, jewelry, cars and other metal surfaces. Can be used with polishing compound.
 Steel brush	1-3	5,000-15,000	Use for removing rust and corrosion and for polishing metal surfaces. Clean your battery cable clamps, remove build-up on grill grates, eliminate rust from your car, garden tools and other metal surfaces.

 Cut-off wheel	5-6	23,000-30,000	Use to easily cut or slot bolts, screws, sheet metal, thin wood and plastic. Cuts only along the edge. Use gentle pressure and hold your rotary tool with both hands to maintain alignment. Do not attempt to sand or cut curved holes with them.
 Cut-off wheel	5-6	23,000-30,000	
 1-1/4" cut-off wheel	5-6	23,000-30,000	
 1-1/4" Reinforced cut-off wheel	5-6	23,000-30,000	
 1/2" sanding drum 60 grit	4-5	17,000-27,000	Use to easily cut or slot bolts, screws, sheet metal, thin wood and plastic. Cuts only along the edge. Use gentle pressure and hold your rotary tool with both hands to maintain alignment. Do not attempt to sand or cut curved holes with them.
 1/2" sanding drum 120 grit	4-5	17,000-27,000	
 Sanding disc 180 grit	5-6	23,000-30,000	Best for fine sanding and light deburring. Sanding will be most effective when you use a very light touch.
 Sanding disc 240 grit	5-6	23,000-30,000	

HOW TO CHANGE THE COLLET (Fig.11)

A 1/8 inch collet and a collet nut is supplied with this rotary tool.

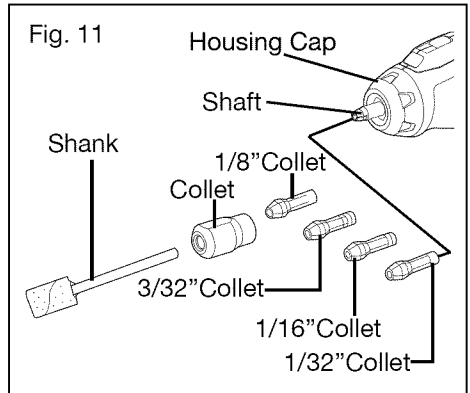
Additional collets are available separately to permit the rotary tool to be used with 1/32, 1/16, and 3/32 inch shank accessories.

To change the collet:

1. Remove the collet nut and remove the old collet.
2. Insert the new collet in the shaft hole.
3. Re-install the collet nut onto the shaft.

CAUTION: Always use the collet that matches the shank size of the accessory you plan to use. Never force a larger diameter shank into a collet.

NOTICE: Different size of collets are available separately at hardware and accessory stores.



MAINTENANCE

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

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 allow brake fluids, gasoline, petroleum-based products, penetrating oils, etc. to come in contact with plastic parts. Chemicals can damage, weaken or destroy plastic which may result in serious personal injury.

⚠ WARNING: When servicing, use only identical replacement parts. Use of any other parts may create a hazard or cause product damage. To ensure safety and reliability, all repairs should be performed by a qualified service technician at a Sears Service Center.

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 trouble-free 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.

- When not in use, it is good practice to unplug the QuickBoost charger and to remove the Lithium-ion battery pack from the tool.

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.



⚠ WARNING: Upon removal of the battery pack for disposal or recycling, cover the battery pack's terminals with heavy-duty adhesive tape. Do not attempt to destroy or disassemble the battery pack or remove any of its components.

Lithium-Ion batteries must be recycled or disposed of properly. Also, never touch the terminals with metal objects and/or body parts as a short circuit may result. Keep away from children. Failure to comply with these warnings could result in fire and/or serious injury.

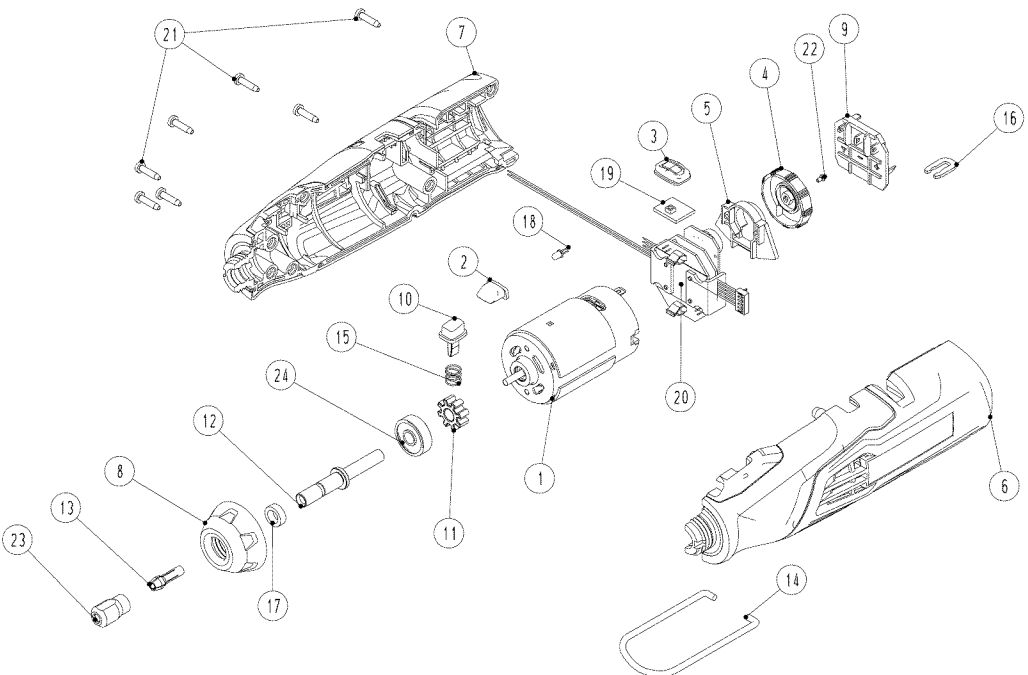
TROUBLE SHOOTING

PROBLEM	CAUSE	SOLUTION
The tool does not work	Battery is depleted	Charge the battery
Motor overheating	Be sure the cooling vents are free from dust and obstacles	Clean and clear vents. Do not cover with hand during operation

PARTS LIST

12.0 VOLT LITHIUM-ION CORDLESS ROTARY TOOL MODEL NUMBER 320. 31224

The Model Number will be found on the Nameplate attached to the handle of the rotary tool. Always mention the Model Number when ordering parts for this tool. To order parts, call 1-800-469-4663.



PARTS LIST

No .	Part No .	Part Name	QTY
1	2730186000	DC Motor	1
	2730003000	Impact Block Assembly	1
2	3126181000	LED Cover	1
3	3126182000	Power Indicator Cover	1
4	3126183000	Depth Adjusting Knob	1
5	3126184000	Switch Support	1
6	3321297000	Left Housing	1
7	3321298000	Right Housing	1
8	3321299000	Top Cover	1
9	3402298000	Contact Receptacle	1
10	3402524000	Spindle-Lock Button	1
11	3520623000	Spindle-Lock Sleeve	1
12	3551757000	Output Shaft	1
13	3551776000	Collet	1
14	3650135000	Pothook	2
15	3660517000	Compression Spring	1
16	3704254000	Handle Hoop	1
17	3705108000	Felt Ring	1
18	4360225000	LED	1
19	4890665000	PCB Assembly	1
20	4890809000	PCB Assembly	1
21	5610012000	Tapping Screw	1
22	5620211000	Tapping Screw	1
23	5620476000	Collet Nut	1
24	5700004000	Ball Bearing	1

