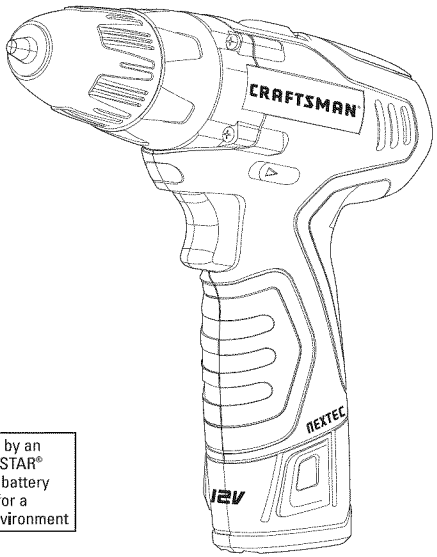
Operator's Manual

CRAFTSMAN®

NEXTEC

12.0-Volt Lithium-Ion Cordless 3/8 in. Reversible Drill

Model No. 320. 10003



Powered by an ENERGY STAR® qualified battery charger for a better environment

ENERGY STAR

C UL US LISTED

⚠ 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

www.craftsman.com

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ONE YEAR FULL WARRANTY ON CRAFTSMAN® TOOL

If this Craftsman tool fails to give complete satisfaction within one year from the date of purchase, return it to any Sears store or Parts & Repair Center or other Craftsman outlet in the United States for free repair (or replacement, if repair proves impossible).

This warranty does not include expendable parts such as lamps, batteries, bits, or blades.

This warranty applies for only 90 days from the date of purchase if this product is ever used for commercial or rental purposes.

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

Sears, Roebuck and Co., Hoffman Estates IL 60179

INTRODUCTION

SAVE THESE INSTRUCIONS!

This cordless Drill 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.

⚠ **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 you 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 Drill. Failure to follow all instructions listed below may result in electric shock, fire, and/or serious personal injury.

SYMBOL SIGNAL MEANING

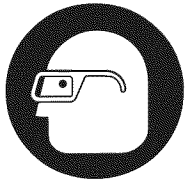
⚠ **DANGER:** Indicates an imminently hazardous situation, which, if not avoided, will result in death or serious injury.

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

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

NOTE: (Without Safety Alert Symbol) Indicates a situation that may result in property damage.

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



⚠ **WARNING**: The operation of any power tool 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
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 SAFETY RULES

⚠ **WARNING:** Read and understand all instructions. Failure to follow all instructions listed below may result in electric shock, fire, and/or serious personal injury. The term "power tool" in all of warnings listed below refers to corded power tools or battery-operated (cordless) power tools.

READ AND SAVE THESE INSTRUCTIONS

WORK AREA SAFETY

- Keep the 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

- 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.
- 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.
- 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 edge, 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.
- 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 a power 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 safety equipment. Always wear eye protection. Safety equipment, such as dust mask, non-skid safety shoes, hard hat, and hearing protection, when used for appropriate conditions, will reduce personal injuries.
- Avoid accidental starting. Make sure that the switch is in the “OFF” position before plugging the tool into an electrical outlet. Carrying power tools with your finger on the switch or plugging in power tools that have the power switch “ON” invites accidents.
- Remove any adjusting key or wrench before turning the power tool on. A wrench or 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, make sure that these are connected and properly used. Use of these devices can reduce dust-related hazards.
- Use clamps or another practical way to support and secure the workpiece to a stable platform. Holding the work by hand or against your body leaves it unstable and may lead to loss of control.
- Do not use on a ladder or unstable support. Stable footing on a solid surface enables better control of the power tool in unexpected situations.
- Keep handles dry, clean, and free from oil and grease. Slippery hands cannot safely control the power tool.
- Always wear safety glasses with side shields. Everyday glasses may have impact-resistant lenses, but they are NOT safety glasses. Following this rule will reduce the risk of eye injury.
- Protect your lungs. Wear a face or dust mask if the operation is dusty. Following this rule will reduce the risk of serious personal injury.
- Protect your hearing. Wear hearing protection during extended periods of operation. Following this rule will reduce the risk of serious person injury.

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 designated.
- 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 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’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, blades, etc. in accordance with these instructions and in the manner intended for the particular type of power tool, 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.
- Hold power tools by the insulated gripping surfaces when performing any operation in which 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 can shock the operator.
- Know your power tool. Read the product manual carefully. Learn the applications and limitations, as well as the specific, potential hazards related to this tool. Following this rule will reduce the risk of electric shock, fire or serious injury.
- Save these instructions. Refer to them frequently and use them to instruct others who may use this tool. If you lend this tool to someone else, also lend them these instructions.

BATTERY TOOL USE AND CARE

- Make sure that the switch is in the OFF position before inserting the battery pack. Inserting the battery pack into power tools that have the switch ON invites accidents.
- 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 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.
- Battery tools do not have to be plugged into an electrical outlet; therefore, they are always in operating condition. Be aware of possible hazards when not using your battery tool or when changing accessories. Following this rule will reduce the risk of electric shock, fire, or serious personal injury.
- Do not place battery tools or their batteries near fire or heat. This will reduce the risk of explosion and possible injury.
- Do not crush, drop or damage the battery pack. Do not use a battery pack or charger that has been dropped or received a sharp blow. A damaged battery is subject to explosion. Properly dispose of a dropped or damaged battery immediately.
- A damaged battery is subject to explosion. Properly dispose of a dropped or damaged battery immediately.
- Batteries vent hydrogen gas and can explode in the presence of a source of ignition, such as a pilot light. To reduce the risk of serious personal injury, never use any cordless product in the presence of open flame. An exploded battery can propel debris and chemicals. If exposed to such debris or chemicals, immediately flush the exposed area with water.
- Do not charge a battery tool in a damp or wet location. Following this rule will reduce the risk of electric shock.
- Under extreme usage or temperature conditions, battery leakage may occur.
- If contact accidentally occurs, flush with water. If liquid contacts eyes, seek medical help. Liquid ejected from the battery may cause irritation or burns.
- If liquid comes in contact with your skin, wash immediately with soap and water, then neutralize with lemon juice or vinegar.
- If liquid from the battery gets in your eyes, flush them with clean water for at least 10 minutes, and then seek immediate medical attention. Following this rule will reduce the risk of serious personal injury.

SERVICE

- Have your power tool serviced by a qualified repair person.
- 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 CORDLESS DRILL

- Know your drill. Read operator's manual carefully. Learn the applications and limitations, as well as the specific potential hazards related to this tool. Following this rule will reduce the risk of electric shock, fire or serious injury.
- 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.
- Remove the battery pack from the Drill before performing any routine maintenance or cleaning.
- Do not disassemble the Drill.
- Do not place the Drill or battery pack near fire or heat. They may explode.
- Use only the recommended the battery pack 320.11221 and charger 320.10006. Any attempt to use another battery pack will cause damage to the Drill; it could possibly explode or cause a fire or personal injury.
- Do not dispose of a worn out battery pack by incinerating. Do not incinerate the battery, even if it is severely damaged or completely worn out. The battery may explode in fire.
- Do not operate the Drill or the charger near flammable liquids or in a gaseous or explosive environment. Internal sparks may ignite fumes.
- To reduce the risk of electric shock, do not put the Drill, battery, or charger in water or other liquid. Do not place or store the product where it can fall or be pulled into a tub or sink.
- Do not store the Drill in a damp or wet location. Do not store in locations where temperature is less than 32°F (0°C) or more than 104°F (40°C). Do not store outside or in vehicles.
- Do not permit children to use the Drill; it is not a toy.
- The Drill workllight lens may produce sufficient heat to melt some fabrics. To avoid serious personal injury, keep the Drill worklight free from contact with other items.

- Keep the Drill dry, clean and free from oil and grease. Always use a clean cloth when cleaning. Never use brake fluids, gasoline, petroleum-based products, or any strong solvent to clean the Drill.
- Do not expose the Drill to rain or wet conditions. Water entering the Drill will increase the risk of electric shock.
- Do not overreach. Keep proper footing and balance at all times. This enables better control of the Drill in unexpected situations. Do not use on a ladder or unstable support.
- For best results, your battery tool should be charged in a location where the temperature is more that 32°F (0°C) but less that 104°F (40°C). Do not store outside or in vehicles.
- 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.
- If the power supply cord is damaged, it must be replaced only by the manufacturer or by an authorized service center to avoid risk.

⚠ **WARNING:** To reduce the risk of injury, user must read instruction manual.

SAFETY RULES FOR CHARGER

⚠ **WARNING:** Read and understand all instructions. Failure to follow all instructions listed below may result in electric shock, fire, and/or serious personal injury.

- Before using the battery charger, read all instructions and cautionary markings in this manual and on the battery charger, the battery and the product using the battery to prevent misuse of the products and possible injury or damage.

⚠ **CAUTION:** To reduce the risk of electric shock or damage to the charger and battery, charge only those lithium-ion rechargeable batteries specifically designated on your charger's label. Other types of batteries may burst, causing personal injury or damage.

- Do not use the charger outdoors or expose it to wet or damp conditions. Water entering the charger will increase the risk of electric shock.
- Use of an attachment not recommended or sold by the battery-charger manufacturer may result in a risk of fire, electric shock, or injury to persons.
- Do not abuse the cord or charger. Never use the cord to carry the charger. Do not pull the charger cord to disconnect the plug from receptacle. Damage to the cord or charger could occur and create an electric shock hazard. Replace damaged cords immediately.

- Make sure that the cord is located so that it will not be stepped on, tripped over, come in contact with sharp edges or moving parts, or otherwise subjected to damage or stress. This will reduce the risk of accidental falls, which could cause injury and damage to the cord, which could then result in electric shock.
- Keep the cord and charger from heat to prevent damage to housing or internal parts.
- Do not allow gasoline, oils, petroleum-based products, etc. to come in contact with plastic parts. These materials contain chemicals that can damage, weaken, or destroy plastic.
- An extension cord should not be used unless absolutely necessary. Use of an improper extension cord could result in a risk of fire and electric shock. If an extension cord must be used, make sure that:

  The pins on plug of extension cord are the same number, size and shape as those of the plug on charger.

  The cord is properly wired and in good electrical condition

  The size is large enough for AC ampere rating of charger as specified below:

The Cord Length (Feet)	25'	50'	100'
Cord Size (AWG)	16	16	16

NOTE: AWG = American Wire Gauge

- Do not operate the charger with a damaged cord or plug, which could cause shorting and electric shock. If damaged, have the charger repaired or replaced by an authorized service technician at a Sears Service Center.
- Do not operate the charger if it has received a sharp blow, been dropped, or has otherwise been damaged in any way. Take it to an authorized service technician at Sears Service Center for an electrical check to determine if the charger is in good working order.
- Do not disassemble the charger. Take it to an authorized service technician at a Sears Service Center when service or repair is required. Incorrect reassembly may result in a risk of electric shock or fire.
- Unplug the charger from the electrical outlet before attempting any maintenance or cleaning to reduce the risk of electric shock.
- Disconnect charger from the power supply when not in use. This will reduce the risk of electric shock or damage to the charger if metal items should fall into the opening. It will also help prevent damage to the charger during a power surge.
- Risk of electric shock. Do not touch the uninsulated portion of output connector or uninsulated battery terminal.

- Save these instructions. Refer to them frequently and use them to instruct others who may use this tool. If you lend this tool to someone else, also lend these instructions to them to prevent misuse of the product and possible injury.

IMPORTANT SAFETY INSTRUCTIONS

- Save these instructions. This manual contains important safety and operating instructions for 12 V DRILL 10003.
- Before using the battery charger, read all instructions and cautionary markings on the battery charger, the battery and the product using batter, as well as the operator's manuals for these products.

⚠ **CAUTION:** To reduce the risk of injury, charge only lithium-ion rechargeable batteries. Other types of batteries may burst, causing personal injury or damage.

⚠ **WARNING:** When using electric appliances, basic precautions should always be followed, including the following.

a) To reduce the risk of injury, close supervision is necessary when an appliance is used near children.

b) Only use attachments recommended or sold by manufacturer.

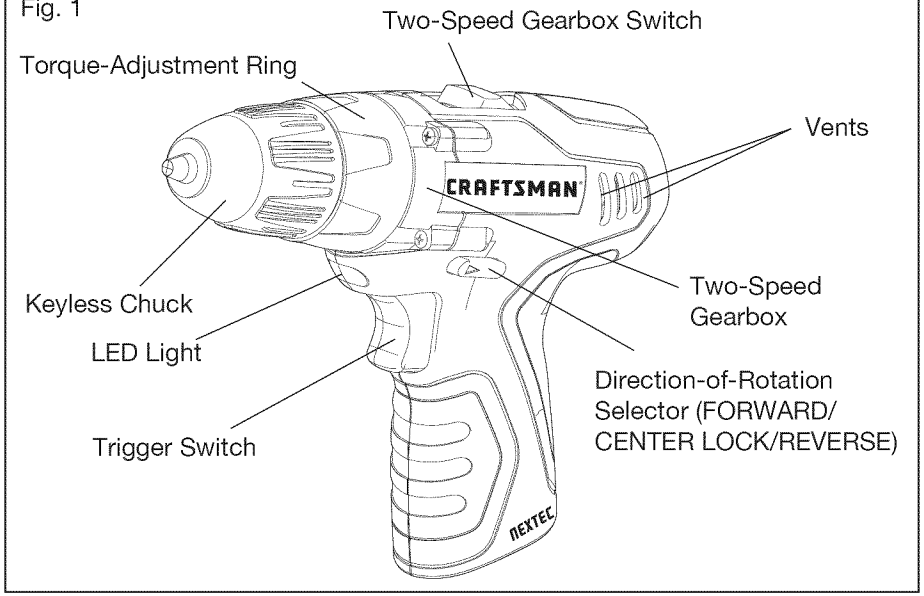
c) Do not use outdoors.

d) For a portable appliance – To reduce the risk of electrical shock, do not put the Drill and Battery Pack in water or other liquid. Do not place or store appliance where or can fall or be pulled into a tub or sink.

DESCRIPTION

KNOW YOUR REVERSIBLE DRILL (Fig.1)

Fig. 1



PRODUCT SEPCIFICATION	
Chuck	3/8-in.
Motor	12 Volt DC
No-Load Speed	LO 0-400/HI 0-1300 (RPM)
Clutch	18 Position
Torque	195 in.lbs
Drill Weight (with battery)	2.42 lbs
Battery Type	Lithium-Ion
Battery Voltage	12.0 Volt DC
Charger Input	120-Volts, 60 Hz 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.

ADJUSTABLE TORQUE

The Drill has a 18-position clutch.

TWO-SPEED GEARBOX

The two-speed gearbox is designed for drilling or driving at LO or HI speeds. A slide switch is located on top of your Drill for selecting the appropriate speed.

VARIABLE SPEED

The variable-speed trigger switch delivers higher speed with increased trigger pressure and lower speed with decreased trigger pressure.

KEYLESS CHUCK

The keyless chuck allows you to hand-tighten or release the Drill bit in the chuck jaws.

FORWARD/REVERSE/CENTER LOCK

The Drill has a direction-of-rotation selector located above the trigger switch for changing the direction of bit rotation. Setting the trigger switch in the OFF (center lock) position helps reduce the possibility of accidental starting when not in use.

LED WORKLIGHT

The LED worklight, located on the front of the drill, illuminates when the trigger switch is depressed. This feature provides extra light for increased visibility.

ASSEMBLY

WARNING: If any parts are broken or missing, do not attempt to plug in the power cord or operate the drill until the broken or missing parts are replaced. Failure to do so could result in possible serious injury.

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

WARNING: To prevent accidental starting that could cause serious personal injury, always remove the battery pack from the drill 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 operator's manual.

PACKING LIST

Drill, Double-ended Bit, Operator's manual.

OPERATION

LOW-BATTERY CAPACITY INDICATOR

If the LED worklight begins to rapidly and continuously flash when the trigger switch on the Drill is depressed, the battery pack's 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, 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 over-loaded 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) - 122°F (50°C).

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

NOTE: 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.)

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.

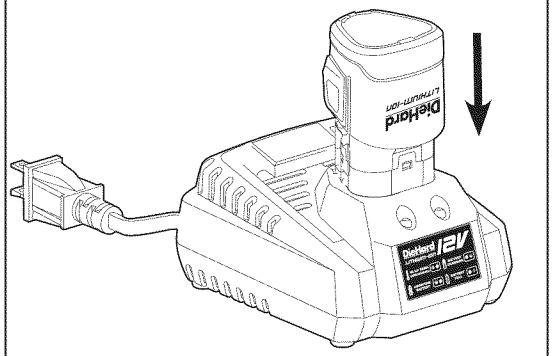
COLD WEATHER OPERATION

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.

Fig. 2



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 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.

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.
6. The green lights 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 BATTERY	Defective	Flashing	Off	Battery pack or Charger/Adapter is defective
BATTERY CHARGING	Charging	Off	Flashing	Charging
BATTERY FULL	Fully charged	Off	On	Charging is complete Maintenance charging

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°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.

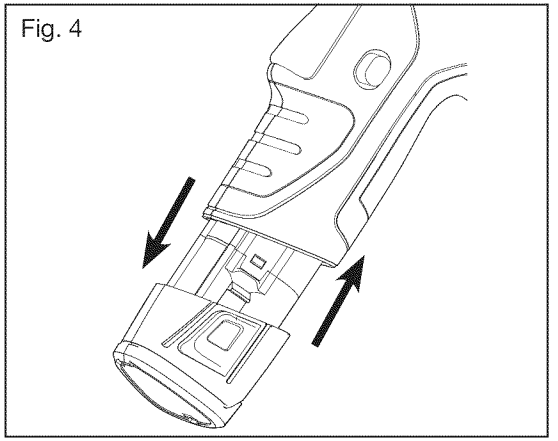
BATTERY FULL

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 charge. Charge in a well ventilated area.

TO ATTACH BATTERY PACK (Fig. 4)

Fig. 4



1. Make sure that the Drill is "OFF"
2. Align the raised rib on the battery pack with the grooves of the Drill, and then attach the battery pack to the Drill.

NOTE: 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. 4)

1. Lock the trigger switch on the Drill by placing the direction of rotation (forward/reverse/ center lock) selector in center position.
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 tool.

⚠ **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 Drill and the latches snap into place properly. Improper assembly of the battery pack can cause damage to internal components.

⚠ **WARNING:** Battery tools are always in operating condition. Therefore, the direction-of-rotation selector should always be locked when not in use or carrying at your side.

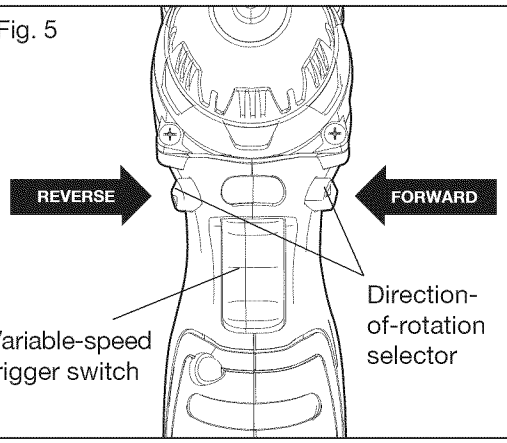
TRIGGER SWITCH (Fig. 5)

To turn the Drill ON, depress the trigger switch. To turn it OFF, release the trigger switch.

VARIABLE SPEED (Fig.5)

The variable-speed trigger switch delivers higher speed with increased trigger pressure and lower speed with decreased trigger pressure.

Fig. 5



DIRECTION-OF-ROTATION SELECTOR (FORWARD/ REVERSE/CENTER LOCK) (Fig. 5)

The direction of bit rotation is reversible and is controlled by a selector located above the trigger switch.

With the Drill held in normal operating position:

1. Position the direction-of-rotation selector to the left of the tool for drilling.
2. Position the direction-of-rotation selector to the right of the tool for reverse.
3. Setting the switch in the OFF (center lock) position helps reduce the possibility of accidental starting when not in use.

⚠ **CAUTION:**To prevent gear damage, always allow the chuck to come to a complete stop before changing the direction of rotation.

NOTE: The Drill will not run unless the direction-of-rotation selector is engaged fully to the left or right.

ELECTRIC BRAKE

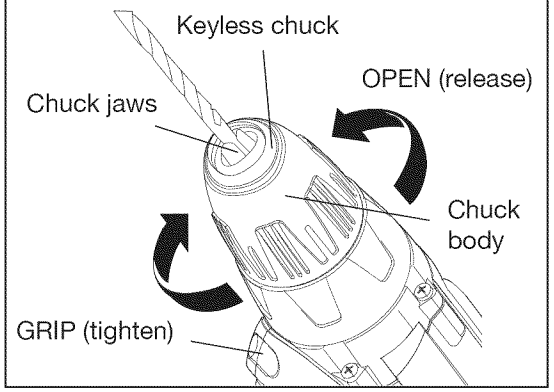
To stop the Drill, release the trigger switch and allow the chuck to come to a complete stop. The electric brake quickly stops the chuck from rotating. This feature engages automatically when you release the trigger switch.

KEYLESS CHUCK (Fig. 6)

The Drill has a keyless chuck to tighten or release drill bits in the chuck jaws. The arrows on the chuck indicate the direction in which to rotate the chuck body in order to GRIP (tighten) or OPEN (release) the chuck jaws on the Drill bit.

⚠ **WARNING:** Do not hold the chuck body with one hand and use the power of the Drill to tighten the chuck jaws on the drill bit. The chuck body could slip in your hand, or your hand could slip and come in contact with the rotating bit. This could cause an accident resulting in serious personal injury.

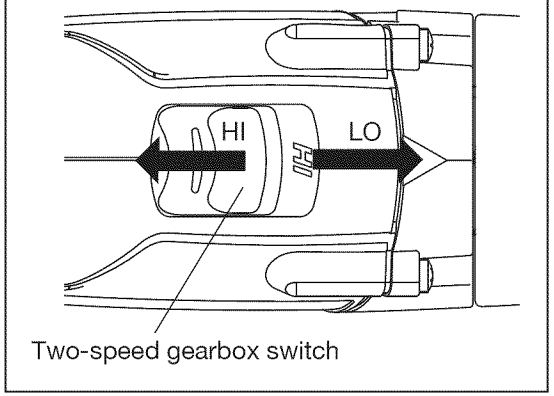
Fig. 6



TWO-SPEED GEARBOX (Fig. 7)

The Drill has a two-speed gearbox designed for drilling or driving at LO or HI speeds. A slide switch is located on the top of the Drill to select either LO or HI speed.

Fig. 7



When using Drill in the LO speed range, the speed will decrease and the Drill will have more power and torque. When using the Drill in the HI speed range, the speed will increase and the Drill will have more driving power and twisting force (torque). Use LO speed for high power and torque applications and HI speed for fast Drilling or driving applications.

Use LO speed for starting holes without a center punch, drilling metals or plastic, drilling ceramics, or in applications requiring a higher torque (see below).

HI speed is better for drilling wood and wood composites and for using abrasive and polishing accessories.

NOTE: Avoid running the Drill at LO speed for extended periods of time. Running at LO speed under constant usage may cause the Drill to become overheated. If this occurs, cool the Drill by running it without a load at HI speed.

⚠ **CAUTION:** Never change gears while the tool is running. Failure to obey this caution could result in serious damage to the Drill.

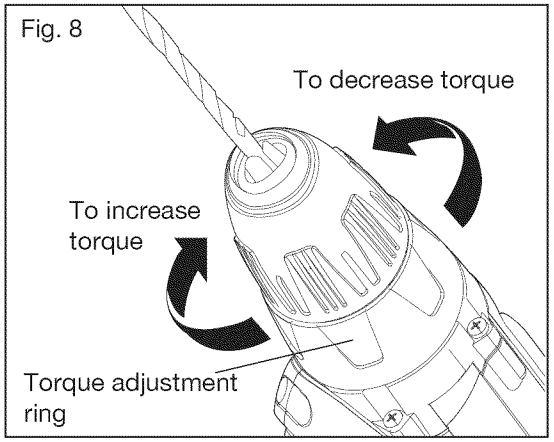
ADJUSTABLE-TORQUE CLUTCH (Fig. 8)

The Torque clutch can be adjusted to 17 different settings. The higher the torque setting, the more force the drill produces to turn an object in either LO or HI rotation speed.

When using the Drill for different driving applications, increase or decrease the torque in order to help prevent damaging screw heads, threads, workpiece, etc.

Adjust the torque by rotating the torque-adjustment ring.

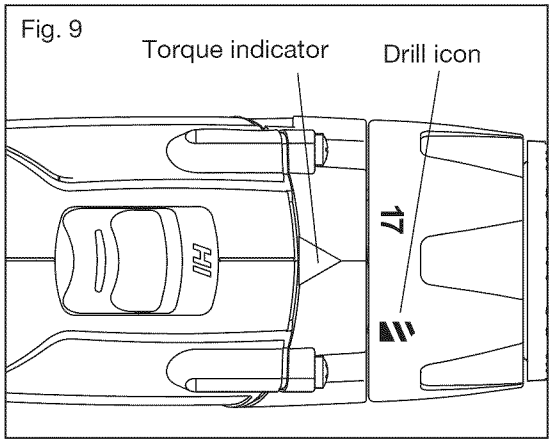
Fig. 8



The proper setting depends on the job and the type of bit, fastener, and material you will be using. In general, use greater torque for larger screws. If the torque is too high, the screws may be damaged or broken.

For delicate operations, such as removing a partially stripped screw, use a low torque setting. For operations such as drilling into hardwood, use a higher torque setting.

Fig. 9



NOTE: When adjusting the torque clutch make sure that the speed switch is either completely in the LO or HI Position.

⚠ **CAUTION:** Do not change the torque setting when the tool is running.

DRILL MODE (Fig. 9)

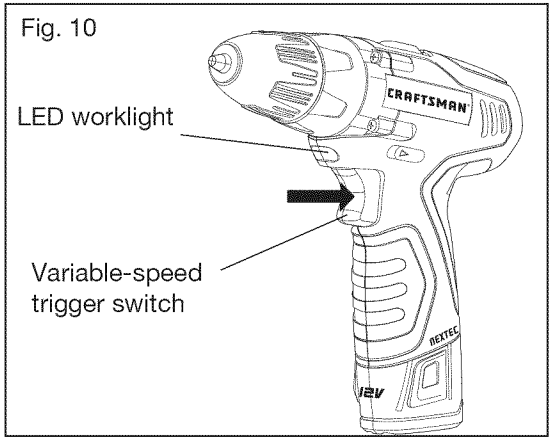
Select Drill mode for drilling and other heavy duty applications.

To select Drill mode, rotate the torque-adjustment ring until the icon aligns with the torque indicator and clicks into position.

LED WORKLIGHT (Fig. 10)

The LED worklight, located on the base of the Drill, will illuminate when the trigger switch is depressed. This provides additional light on the surface of the workpiece for operation in lower-light areas. The LED worklight will turn off when the trigger switch is released.

Fig. 10

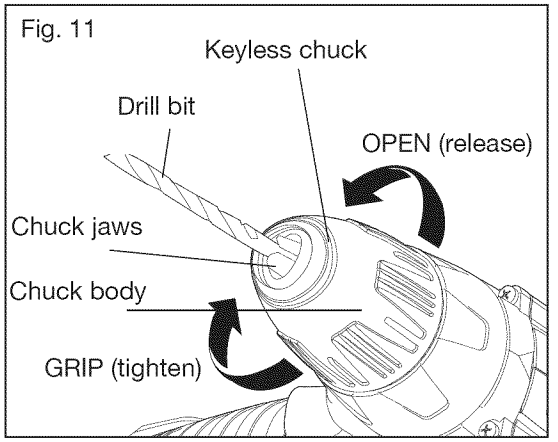


INSTALLING BITS (Fig. 11)

1. Lock the trigger switch by placing the direction-of-rotation selector in the OFF (center) position.
2. Open or close the chuck jaws to a point where the opening is slightly larger than the bit size you intend to use.
3. Raise the front of the Drill slightly to keep the bit from falling out of the chuck jaws.
4. Insert a drill bit.

NOTE: Rotate the chuck body in the direction of the arrow marked GRIP to close the chuck jaws. Do not use a wrench to tighten or loosen the chuck jaws.

Fig. 11



5. Tighten the chuck jaws securely on the bit.

REMOVING BITS (Fig. 11)

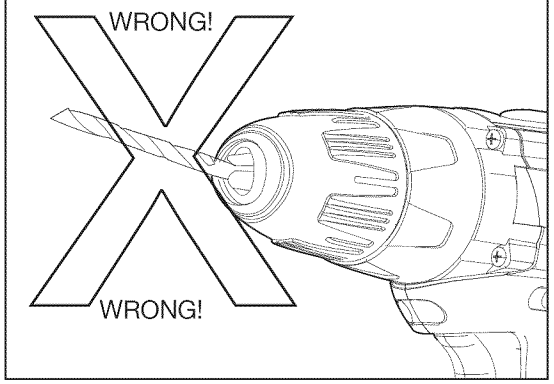
1. Lock the trigger switch by placing the direction-of-rotation selector in the OFF (center) position.
2. Open the chuck jaws.

NOTE: Rotate the chuck body in the direction of the arrow marked OPEN to loosen the chuck jaws. Do not use a wrench to tighten or loosen the chuck jaws.

3. Remove the drill bit.

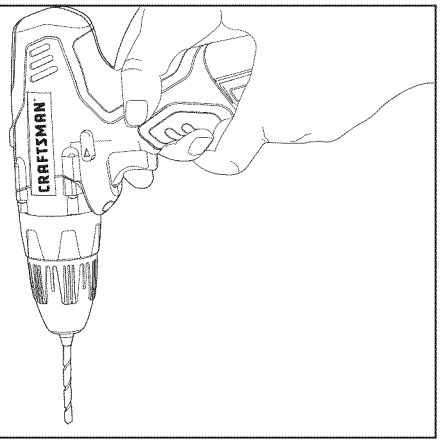
⚠ WARNING: Make sure to insert the drill bit straight into the chuck jaws. Do not insert the drill bit into the chuck jaws at an angle and then tighten, as shown in figure 12. This could cause the Drill bit to be thrown from the Drill, resulting in possible serious personal injury or damage to the chuck.

Fig. 12



DRILLING (Fig. 13)

Fig. 13



1. Check that the direction-of-rotation selector is at the correct setting (forward or reverse).
2. Secure the material to be drilled in a vise or with clamps to keep it from turning as the drill bit rotates.
3. Hold the Drill firmly, and place the bit at the point to be drilled.
4. Depress the trigger switch to start the Drill.
5. Move the drill bit into the workpiece, applying only enough pressure to keep the bit cutting. Do not force the Drill or apply side pressure to elongate a hole. Let the tool do the work.
6. When drilling hard, smooth surfaces, use a center punch to mark the desired location of the hole. This will prevent the drill bit from slipping off-center as the hole is started.
7. When drilling metals, use light oil on the drill bit to keep it from overheating. The oil will prolong the life of the bit and increase the drilling action.
8. If the bit jams in the workpiece or if the Drill stalls, stop the tool immediately. Remove the bit from the workpiece and determine the reason for jamming.

⚠ WARNING: This Drill is equipped with an electric brake. When the brake is functioning properly, sparks may be visible through the vent slots in the housing. This is normal and results from the action of the brake.

WOOD DRILLING

For maximum performance, use high-speed steel or brad-point bits for wood drilling.

1. Begin drilling at a very low speed to prevent the bit from slipping off the starting point.
2. Increase speed as the drill bit bites into the material.
3. When drilling "through" holes, place a block of wood behind the workpiece to prevent ragged or splintered edges on the back side of the hole.

METAL DRILLING

For maximum performance, use high speed steel bits for metal or steel drilling.

1. When drilling metals, use light oil on the drill bit to keep it from overheating. The oil will prolong the life of the bit and increase the drilling action.
2. Begin drilling at a very low speed to prevent the bit from slipping off the starting point.
3. Maintain a speed and a pressure which allow cutting without overheating the bit. Applying too much pressure will:

   Overheat the Drill.
   Wear the bearings.
   Bend or burn bits.
   Produce off-center or irregularly shaped holes.

MASONRY DRILLING

For maximum performance, use carbide-tipped masonry bits when drilling holes in brick, tile, concrete, etc.

1. Maintain a speed and a pressure which allow cutting without overheating the bit or Drill. Applying too much pressure will:

   Overheat the Drill.
   Wear the bearings.
   Bend or burn bits.
   Produce off-center or irregular-shaped holes.
2. Apply light pressure and medium speed for best results in brick.
3. Apply additional pressure for hard materials such as concrete.
4. When drilling holes in tile, practice on a scrap piece to determine the best speed and pressure.
5. Begin drilling at a very low speed to prevent the bit from slipping off the starting point.

⚠ WARNING: Always wear safety goggles or safety glasses with side shields during power tool operation or when blowing dust. If operation is dusty, also wear a dust mask.

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

MAINTENANCE

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

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

⚠ WARNING: It is not recommended to use compressed dry air as cleaning method of the drill. If cleaning with compressed air is the only method to apply, always wear safety goggles or safety glasses with side shields when using compressed air to clean the tool. If the operation is dusty, also wear a dust mask.

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. 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 Craftsman 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.

- It is good practice to unplug the Charger/Adapter 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.

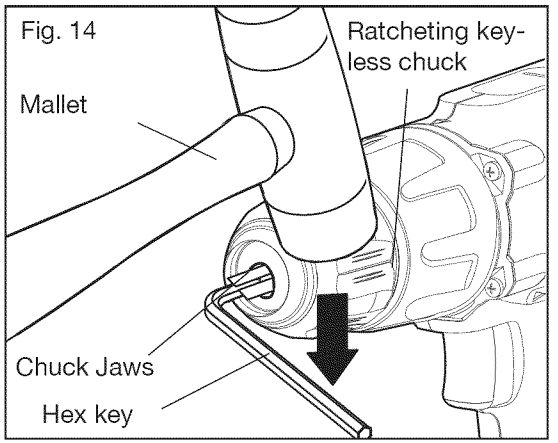
⚠ WARNING: Upon removal of the battery pack for disposal or recycling, cover the battery pack's terminals with heavy-duty adhesive tape. Do not attempt to destroy or disassemble the battery pack or remove any of its components. Lithium-Ion batteries must be recycled or disposed of properly. Also, never 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.

CHUCK REMOVAL (Fig. 14-16)

The chuck can be removed and replaced with a new one.

1. Lock the trigger switch by placing the direction-of-rotation selector in the center position.
2. Open the chuck jaws.
3. Insert a 5/16-in. or larger hex key into the chuck of the Drill and tighten the chuck jaws securely.
4. Tap the hex key sharply with a mallet in a clockwise direction. This will loosen the screw in the chuck for easy removal.
5. Open the chuck jaws and remove the hex key. Using a screwdriver, remove the chuck screw by turning it in a clockwise direction.

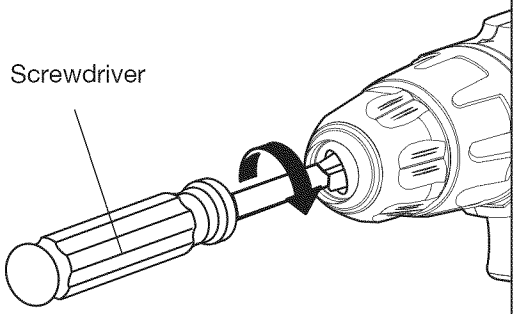
Fig. 14



NOTE: The chuck screw has left-handed threads.

6. Insert the hex key into the chuck and tighten the chuck jaws securely. Tap sharply with a mallet in a counterclockwise direction. This will loosen the chuck on the spindle. It can now be unscrewed by hand.

Fig. 15

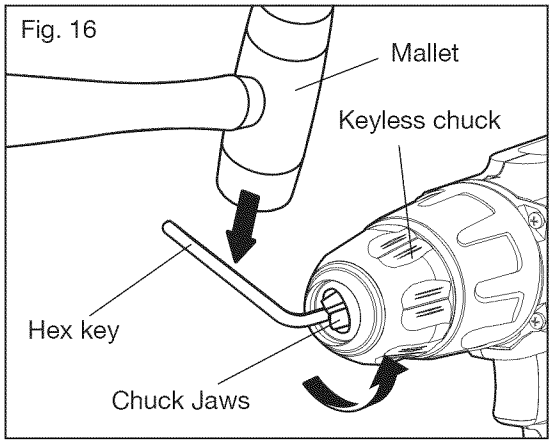


TO RETIGHTEN A LOOSE CHUCK

The chuck may become loose on the spindle and develop a wobble. Also, the chuck screw may become loose, causing the chuck jaws to bind and prevent them from closing.

To tighten a loose chuck or chuck screw:

Fig. 16



1. Lock the trigger switch by placing the direction-of-rotation selector in the center position.
2. Open the chuck jaws.
3. Insert the hex key into the chuck and tighten the chuck jaws securely. Tap the hex key sharply with a mallet in a clockwise direction. This will tighten the chuck on the spindle.
4. Open the chuck jaws and remove the hex key.
5. Using a screwdriver, tighten the chuck screw by turning the chuck screw in a counterclockwise direction.

⚠ **WARNING:** Always wear safety glasses with side shields during maintenance.

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

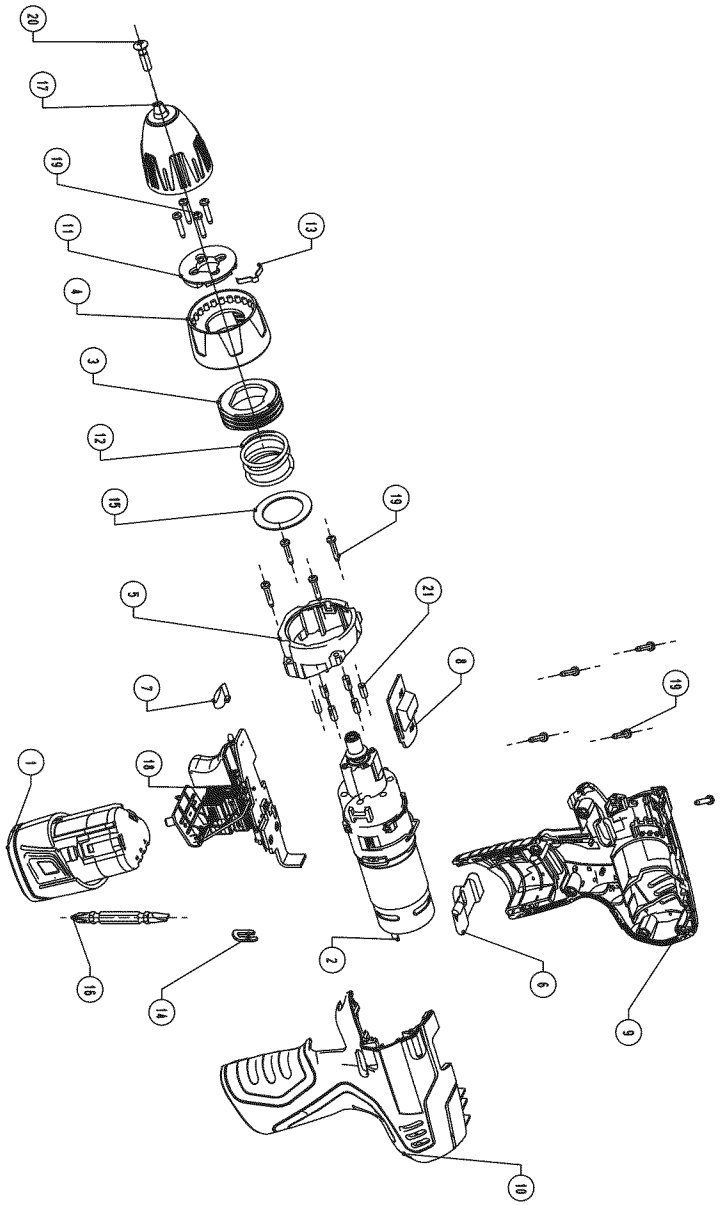
⚠ **WARNING:** To avoid serious personal injury, always remove the battery pack from the tool and unplug the Charger when cleaning or performing any maintenance.

TROUBLESHOOTING

PROBLEM	CAUSE	SOLUTION
The Drill does not work	Battery is depleted	Charge the battery
Bit cannot be installed	Sleeve is not released	Release the sleeve
Motor overheating	Be sure cooling vents are free from saw dust and obstacles	Clean, clear vents. Do not cover with hand during operation

12.0 VOLT LITHIUM-ION CORDLESS 3/8-IN. REVERSIBLE DRILL MODEL NO. 320. 10003

The Model Number will be found on the Nameplate attac hed to the handle of the Worklight. Always mention the Model Number when ordering parts for this tool.



12.0 VOLT LITHIUM-ION CORDLESS3/8IN. REVERSIBLE DRILL MODEL NO. 320. 10003

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

No	Part No	Part Name	QTY
1	2770153000	5120 Power Pack	1
2	2790153000	Gear Case ASSY	1
3	3124050000	Sleeve	1
4	3124051000	Clutch Cap	1
5	3124076000	Front Housing	1
6	3124078000	F/R Button	1
7	3124148000	LED Cover	1
8	3124777000	Speed Change Button	1
9	3320666000	Right Housing Assy	1
10	3320667000	Left Housing Assy	1
11	3420896000	Mounting Plate	1
12	3660357000	Spring	1
13	3704078000	Spring Stop	1
14	3704254000	Handle Hoop	1
15	3704407000	Washer	1
16	3810357000	Screw Bit	1
17	3860091000	Chuck	1
18	4890454000	PCB Assembly	1
19	5610013000	Tapping Screw	14
20	5620179000	Screw(L.)	1
21	5670207000	Pin	6

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