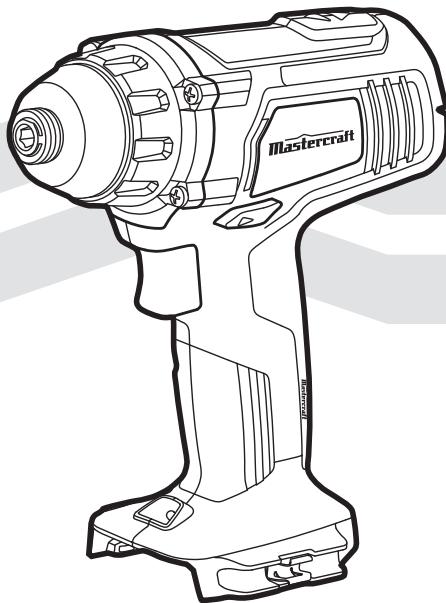


# Mastercraft™



INSTRUCTION MANUAL

## 20V max\* LITHIUM-ION CORDLESS IMPACT DRIVER

054-3175-8

If any parts are missing or damaged, or if you have any questions, please call our toll-free helpline at 1-800-689-9928.



Read and understand this instruction manual thoroughly before using the product. It contains important information for your safety as well as operating and maintenance advice.

Keep this instruction manual for future use. Should this product be passed on to a third party, then this instruction manual must be included.

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MOTOR	20V DC
NO-LOAD SPEED	0-2500 RPM
IMPACT RATE	0-3200 BPM
COLLET CAPACITY	Hex 1/4" (6.35 mm)
MAX. TORQUE	1400 in-lb
TOOL WEIGHT (WITHOUT BATTERY)	2 lb 12 oz (1.22 kg)
BATTERY TYPE	Lithium-Ion
BATTERY VOLTAGE	20V max* DC
CHARGE INPUT	120V, 60 Hz AC only
OPTIMUM CHARGING TEMPERATURE	0-40°C (32-104°F)

\*Maximum battery voltage without workload; with workload nominal voltage is 18V.

### WARNING!



Safety symbols in this Instruction Manual are used to flag possible dangers. The safety symbols and their explanations require your full understanding. The safety warnings do not, by themselves, eliminate any danger, nor are they substitutes for proper accident prevention measures.

### WARNING!



This Safety Alert Symbol indicates caution, warning, or danger. Failure to obey a safety warning can result in serious injury to yourself or others. To reduce the risk of injury, fire, or electric shock, always follow the safety precautions.

### Know your tool

To operate this tool, carefully read this Instruction Manual and all labels affixed to the Cordless Impact Driver before using. Keep this manual available for future reference.

### Important

This tool should only be serviced by a qualified service technician. For more information, call the toll-free helpline at 1-800-689-9928.

### Read all instructions thoroughly

### Save these 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 the work area clean and well lit.** Cluttered or dark areas invite accidents.
- **Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases or dust.** Power tools create sparks, which may ignite the dust or fumes.
- **Keep children and bystanders away while operating a power tool.** Distractions can cause you to lose control.

## Electrical safety

- **Power tool plugs must match the outlet. Never modify the plug in any way. Do not use any adapter plugs with earthed (grounded) power tools.** Unmodified plugs and matching outlets will reduce the risk of electric shock.
- **Avoid body contact with earthed or grounded surfaces such as pipes, radiators, ranges and refrigerators.** There is an increased risk of electric shock if your body is earthed or grounded.
- **Do not expose power tools to rain or wet conditions.** Water entering a power tool will increase the risk of electric shock.
- **Do not abuse the cord.** Never use the cord for carrying, pulling or unplugging the power tool. Keep 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 dust mask, non-skid safety shoes, hard hat, or hearing protection, used for appropriate conditions, will reduce personal injuries.
- **Prevent unintentional starting.** **Ensure the switch is in the off-position before connecting to power source and/or battery pack, picking up or carrying the tool.** Carrying power tools with your finger on the switch or energising 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 jewellery. Keep your hair, clothing and gloves away from moving parts.** Loose clothes, jewellery 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 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, tool bits, etc. in accordance with these instructions, taking into account the working conditions and the work to be performed.** Use of the power tool for operations different from those intended could result in a hazardous situation.

## Battery tool use and care

- **Recharge only with the charger specified by the manufacturer.** A charger that is suitable for one type of battery pack may create a risk of fire when used with another battery pack.
- **Use power tools only with specifically designated battery packs.** Use of any other battery packs may create a risk of injury and fire.

- **When battery pack is not in use, keep it away from other metal objects like 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.

## Safety guidelines for cordless impact driver

- **To reduce the risk of electric shock or damage to the charger and battery, use only the batteries and charger listed.**

Battery pack	Charger
054-3124-0	054-3126-6
054-3125-8	

- **Hold power tools by insulated gripping surfaces when performing an operation where the tool may contact hidden wiring or its own cord.** Contact with a "live" wire may make exposed metal parts of the power tool "live" and could give the operator an electric shock.
- **The label on your tool may include the following symbols. The symbols and their definitions are as follows:**

V .....	Volts
A .....	Amperes
Hz .....	Hertz
W .....	Watts
min .....	Minutes
~ .....	Alternating current
— .....	Direct current
$n_0$ .....	No-load speed
	Class II Construction

.../min ..... Revolutions per minute

 ..... Grounding terminal

BPM ..... Beats per minute

 ..... WARNING – To reduce the risk of injury, user must read instruction manual.

- **Secure the workpiece.** Clamping devices or a vise will hold the workpiece in place better than the hand.
- **Always wait until the tool has come to a complete stop before placing it down.** The tool insert can jam, which can lead to loss of control.
- **Always set the rotational direction switch to centre position before performing any kind of work on the machine (e.g., maintenance, tool change, etc.) and when transporting and storing it.** Unintentional activation of the On/Off switch may result in personal injury.
- **Wear ear protectors when using the impact driver.** Exposure to noise can cause hearing loss.
- **Use protective gloves when removing the bit from the tool, or allow the clamp to cool down first.** The bit may be hot after prolonged use.
- **Use protective gloves when operating the tool.** Protective gloves can help to keep you from being burnt and hurt.
- **Keep your hands away from the motor housing vents.** Hot gas comes from the vents during operation.
- **Release the trigger immediately when the screw is tightened to avoid breaking the screw.**

## Contents:

Cordless impact driver, 2 single ended bits, nylon tote and instruction manual.



### WARNING!

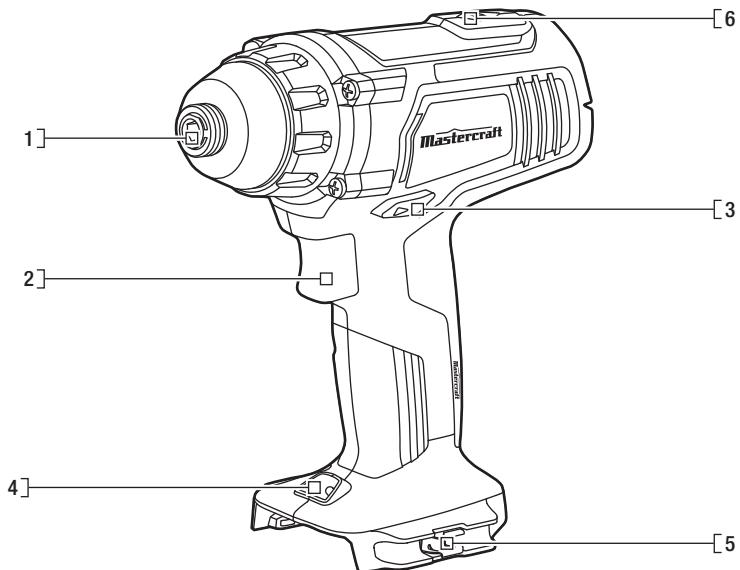
Remove the cordless impact driver from the package and examine it carefully. Do not discard the carton or any packaging material until all parts have been examined.



### WARNING!

If any part of the impact driver is missing or damaged, do not attach the battery pack to the tool or use the tool until the part has been repaired or replaced. Failure to heed this warning could result in serious injury.

## Know your tool



No.	Description	No.	Description
1	Sleeve	4	LED Worklight
2	Variable-speed Trigger Switch	5	Bit Clip
3	Direction-of-rotation Selector	6	Forward/reverse LED indicator

Before attempting to use this tool, become familiar with all of its operating features and safety requirements. For optimum performance and safety, read the following operating instructions carefully before using.

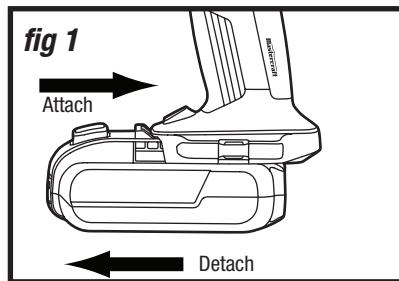
**WARNING!**

Do not allow familiarity with the Cordless impact driver to cause a lack of alertness. A fraction of a second of carelessness is enough to cause severe injury.

## To attach the battery pack (fig 1)

**WARNING!**

To avoid the possibility of accidental starting, always take care not to activate the trigger switch when you are attaching the battery pack or performing other adjustments to the tool.



1. Lock the trigger switch on the impact driver by placing the direction-of-rotation selector (forward/centre lock/reverse) in the centre position.
2. Align the raised rib on the battery pack with the grooves of the impact driver, and then attach the battery pack to the impact driver.
3. Make sure that the latch on the battery pack snaps into place, and that the battery pack is attached securely to the tool before beginning operation.

**NOTICE:** When placing a battery pack on the tool, be sure that the raised rib on the battery pack aligns with the groove on the cordless impact driver and the latches snap into place properly. Improper assembly of the battery pack can cause damage to internal components.

## To detach the battery pack (fig 1)

1. Lock the trigger switch on the impact driver by placing the direction-of-rotation selector (forward/centre lock/reverse) in the centre position.
2. Depress the battery-release button located on the front of the battery pack to release the battery pack.
3. Pull the battery pack out and remove it from the tool.

## Trigger switch (fig 2)

1. To turn the impact driver ON, depress the trigger switch.
2. To turn it OFF, release the trigger switch.

## Variable speed (fig 2)

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

## Direction-of-rotation selector (forward/centre lock/reverse) (fig 2-4)

The direction of bit rotation is reversible, and is controlled by a selector located above the trigger switch. With the impact driver held in normal operating position:

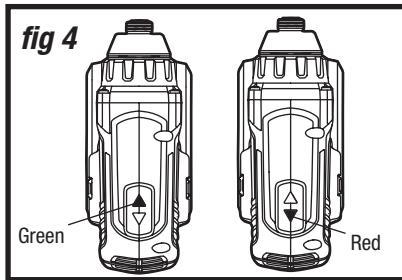
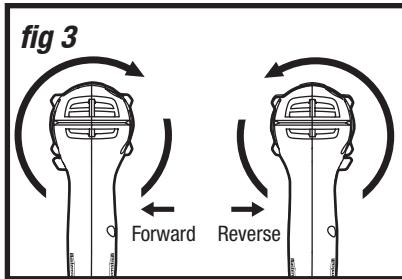
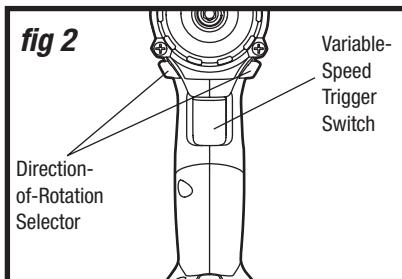
Position the direction-of-rotation selector to the left of the tool for forward rotation. The forward/reverse LED indicator on the impact driver will shine green (fig 4).

Position the direction-of-rotation selector to the right of the tool for reverse rotation. The forward/reverse LED indicator on the impact driver will shine red (fig 4).

Position the switch in the OFF (centre lock) position helps reduce the possibility of accidental starting when not in use.

**NOTICE:** To prevent gear damage, always allow the impact driver to come to a complete stop before changing the direction of rotation.

**NOTICE:** The impact driver will not run unless the direction-of-rotation selector is engaged fully to the left or right.



## Electric brake

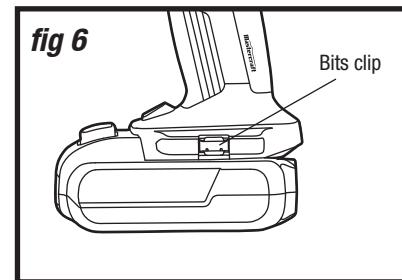
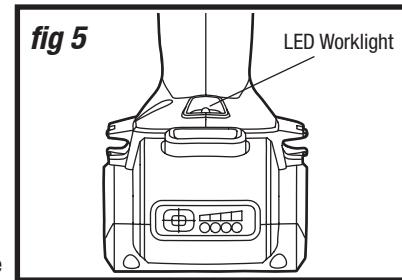
To stop the impact driver, release the trigger switch and allow the tool to come to a complete stop. The electric brake quickly stops the rotation. This feature engages automatically when you release the trigger switch.

## LED worklight (fig 5)

The LED worklight, located on the base of the impact driver, will illuminate when the trigger switch is depressed. The LED worklight will turn off when the trigger switch is released.

## Bit storage (fig 6)

When not in use, a bit may be stored on either side of the cordless impact driver by snapping it into place in the bit clip.



## Installing a driver bit or socket bit (fig 7)

1. Lock the trigger switch by placing the direction-of-rotation selector in the OFF (centre) position.
2. With one hand, pull the sleeve toward the front of the tool, and hold it in place.
3. With the other hand, insert the 1/4" (6.35 mm) bit into the hexagonal hole in the bit retainer.
4. Release the sleeve, and verify that it returns to its original position.



### WARNING!

If the sleeve does not return to its original position, the bit is not correctly installed. Retry until the bit is properly installed.



### WARNING!

Only use sockets designed for impact drivers. Sockets not designed for impact drivers could break and result in user injury. Inspect sockets prior to use to ensure that they have no cracks or other visible damage.

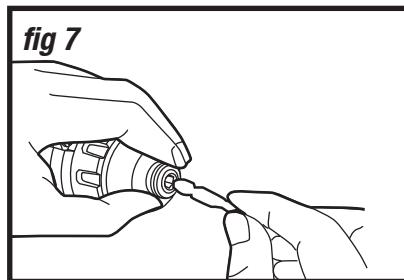
## Removing a driver bit or socket bit (fig 7)

1. Lock the trigger switch by placing the direction-of-rotation selector in the OFF (centre) position.
2. Pull the sleeve toward the front of the tool, and hold it in place.
3. Remove the bit from the hexagonal hole in the bit retainer.
4. Release the sleeve.



### WARNING!

Use protective gloves when removing the bit from the tool, or allow the bit to cool down first. The bit may be hot after prolonged use.



*fig 7*

## Tightening screws or nuts (fig 8)

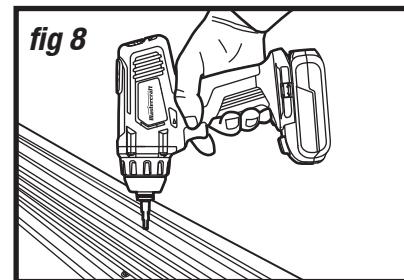
1. Install the correct bit.
2. Apply just enough pressure to keep the bit engaged on the screw or nut.
3. Position the direction-of-rotation selector to the left of the tool for forward rotation.
4. Apply minimal pressure to the trigger switch initially. Increase the speed only when full control can be maintained.



### WARNING!

Do not over-tighten, because the force of the impact driver can break the fastener. Keep the impact driver pointed straight at the fastener to avoid damaging the fastener head.

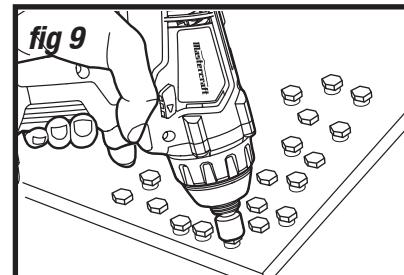
**NOTICE:** Before starting your job, always perform a test operation to determine the proper fastening time.



*fig 8*

## Loosening screws and nuts (fig 9)

1. Install the correct bit.
2. Apply just enough pressure to keep the bit engaged on the screw or nut.
3. Position the direction-of-rotation selector to the right of the tool for reverse rotation.
4. Apply minimal pressure to the trigger switch initially. Increase the speed only when full control can be maintained.



*fig 9*

## Tightening torque

The fastening torque is affected by a wide variety of factors including the following. After fastening, always check the torque with a torque wrench.

- **Voltage:** Low voltage, due to a nearly discharged battery, will reduce fastening torque.
- **Socket size:** Failure to use the correct socket size will cause a reduction in fastening torque.
- **Bolt Size:** Larger bolt diameters generally require higher fastening torque. Fastening torque will also vary according to length, grade, and torque coefficient.
- **Bolt:** Ensure that all threads are free of rust and other debris to allow proper fastening torque.
- **Material:** The type of material and surface finish of the material will affect fastening torque.

**Before each use**

1. Inspect the cordless impact driver, the trigger switch, and the battery pack for damage.
2. Check for damaged, missing, or worn parts.
3. Check for loose screws, misalignment or binding of moving parts, or any other condition that may affect the operation.
4. If abnormal vibration or noise occurs, turn the tool off immediately and have the problem corrected before further use. Remove the battery from the power tool before cleaning or performing any maintenance. Using compressed air may be the most effective cleaning method. Always wear safety goggles when cleaning tools using compressed air.

**WARNING!**

Do not allow brake fluids, gasoline, petroleum-based products, penetrating oil, etc. come into contact with plastic parts. These substances contain chemicals that can damage, weaken, or destroy plastic.

**WARNING!**

When servicing, use only identical replacement parts. The use of any other parts may create a hazard or cause damage to the product.

**WARNING!**

Use only accessories that are recommended for this cordless impact driver by the manufacturer. Accessories that may be suitable for one tool may become hazardous when used with another tool.

**WARNING!**

To ensure safety and reliability, all repairs should be performed by a qualified service technician.

PROBLEM	POSSIBLE CAUSES	SOLUTIONS
The impact driver does not work	The battery is depleted	Charge the battery
The bit cannot be installed	The sleeve is not released	Release the sleeve
	The bit does not fit the sleeve	Use a suitable bit
The motor overheats	Be sure the cooling vents are free of dust and obstacles	Clean and clear vents. Do not cover with hand during operation

**WARNING!**

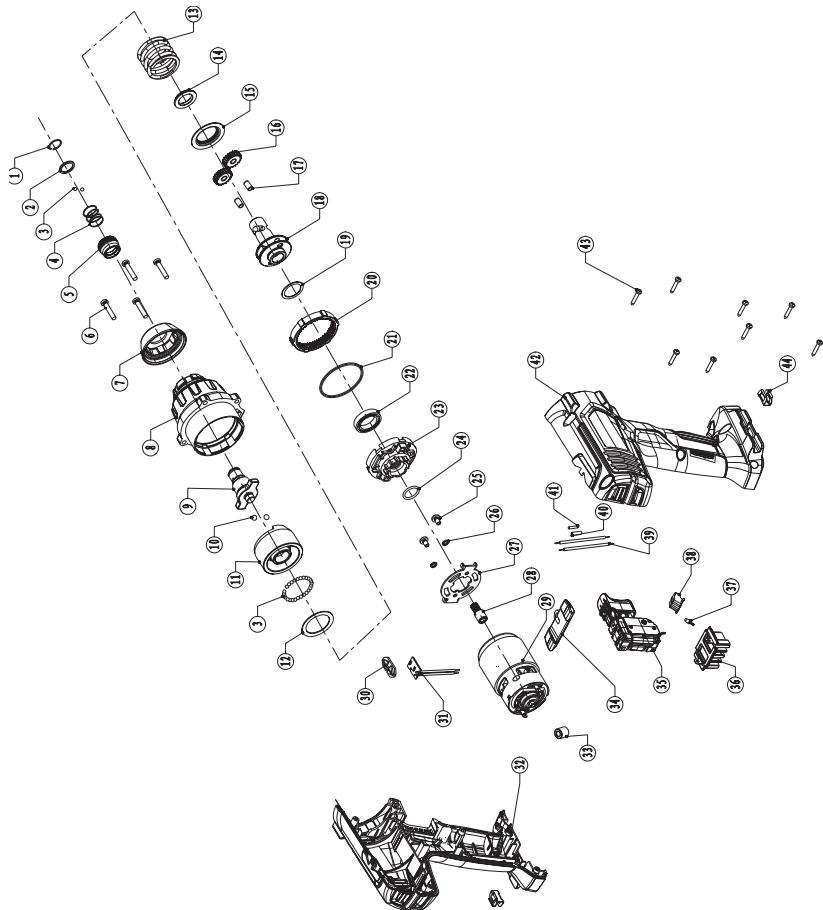
Turn the trigger switch to the "OFF" (centre) position and remove the battery from the power tool before performing troubleshooting procedures.

If the problem remains unsolved after performing the checks described above, call the toll-free helpline at 1-800-689-9928.

## PARTS LIST

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### Exploded view



No.	Part No.	Description	No.	Part No.	Description
1	5660035000	Circlips For Shaft	23	3126562000	Rear Gear Housing
2	5650192000	Washer	24	5690007000	O Ring
3	5700178000	Steel Ball	25	5620037000	Screw
4	3660177000	Spring	26	5650007000	Spring Washer
5	3550606000	Bushing	27	3703951000	Bracket
6	5610106000	Tapping Screw	28	3520658000	Pinion
7	3126543000	Cover	29	2730195000	DC Motor
8	3421381000	Front Gear Housing	30	3126503000	Lens
9	3551807000	Spindle	31	4890709000	PCB Assembly
10	5700226000	Steel Ball	32	3321620000	Left Housing Assembly
11	3551809000	Impact Block	33	3680140000	Magnet Ring
12	5650430000	Washer	34	3126501000	F/R Button
13	3660528000	Compression Spring	35	4870452000	Trigger Switch
14	5690274000	Rubber Ring	36	3402385000	Contact Receptacle Assembly
15	5650163000	Spring Washer	37	4360225000	LED
16	3520657000	Planet Gear	38	3126500000	LED Cover
17	5670319000	Torque Pin	39	4860003000	Inner Wire
18	3551808000	Spindle	40	4920154000	Shrinkable Tube
19	5650429000	Washer	41	4920158000	Shrinkable Tube
20	3520656000	Ring Gear	42	3321616000	Right Housing Assembly
21	5690142000	O Ring	43	5610013000	Tapping Screw
22	5700179000	Bearing	44	3703673000	Bits Holder

If any parts are missing or damaged, or if you have any questions,  
please call the Toll-free Helpline, at 1-800-689-9928.

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## PARTS LIST

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This Mastercraft product is guaranteed **three (3) years from the date of original retail purchase** against defects in materials and workmanship, except for the following components:

- a) Component A: Batteries, chargers and carrying case, which are guaranteed for a period of 2 years from the date of original retail purchase against defects in workmanship and materials;
- b) Component B: Accessories, which are guaranteed for a period of 1-year from the date of original retail purchase against defects in workmanship and materials.

Subject to the conditions and limitations described below, this product, if returned to us with proof of purchase within the stated warranty period and if covered under this warranty, will be repaired or replaced (with the same model, or one of equal value or specification), at our option. We will bear the cost of any repair or replacement and any costs of labour relating thereto.

### These warranties are subject to the following conditions and limitations:

- a) a bill of sale verifying the purchase and purchase date must be provided;
- b) this warranty will not apply to any product or part thereof which is worn or broken or which has become inoperative due to abuse, misuse, accidental damage, neglect or lack of proper installation, operation or maintenance (as outlined in the applicable owner's manual or operating instructions) or which is being used for industrial, professional, commercial or rental purposes;
- c) this warranty will not apply to normal wear and tear or to expendable parts or accessories that may be supplied with the product which are expected to become inoperative or unusable after a reasonable period of use;
- d) this warranty will not apply to routine maintenance and consumable items such as, but not limited to, fuel, lubricants, vacuum bags, blades, belts, sandpaper, bits, fluids, tune-ups or adjustments;
- e) this warranty will not apply where damage is caused by repairs made or attempted by others (i.e. persons not authorized by the manufacturer);

- f) this warranty will not apply to any product that was sold to the original purchaser as a reconditioned or refurbished product (unless otherwise specified in writing);
- g) this warranty will not apply to any product or part thereof if any part from another manufacturer is installed therein or any repairs or alterations have been made or attempted by unauthorized persons;
- h) this warranty will not apply to normal deterioration of the exterior finish, such as, but not limited to, scratches, dents, paint chips, or to any corrosion or discolouring by heat, abrasive and chemical cleaners; and
- i) this warranty will not apply to component parts sold by and identified as the product of another company, which shall be covered under the product manufacturer's warranty, if any.

### Additional limitations

This warranty applies only to the original purchaser and may not be transferred. Neither the retailer nor the manufacturer shall be liable for any other expense, loss or damage, including, without limitation, any indirect, incidental, consequential or exemplary damages arising in connection with the sale, use or inability to use this product.

### Notice to consumer

This warranty gives you specific legal rights, and you may have other rights, which may vary from province to province. The provisions contained in this warranty are not intended to limit, modify, take away from, disclaim or exclude any statutory warranties set forth in any applicable provincial or federal legislation.

**IMPORTED BY MASTERCRAFT CANADA TORONTO, CANADA M4S 2B8**

