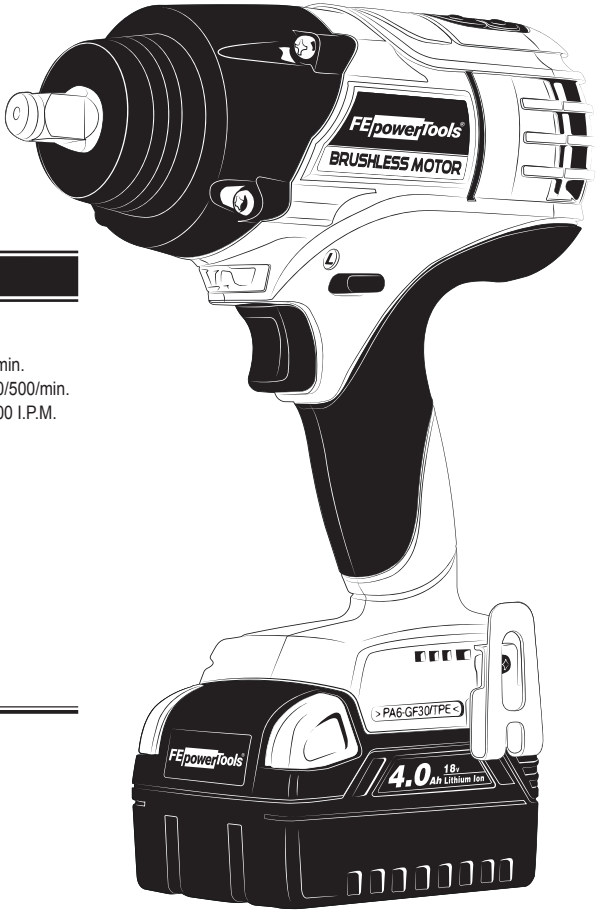
FEpowerTools®

USER MANUAL

18V Li-ion High Torque Brushless Impact Wrench



SPECIFICATIONS

Square Driver . . . . . 1/2" (12.7mm)
Motor 18V
No load speed . . . . . (L) 0~900/min. (M) 0~1,200/min.
. . . . . (H) 0~1,900/min. (R) 0~1,900/500/min.
Impacts per minute . . . . . (L) 0~1,200 I.P.M. (M) 0~1,600 I.P.M.
. . . . . (H) 0~2,400 I.P.M.
Max. torque. . . . . 650 Nm
Net weight (w/o battery) . . 2.32kg

Charger

Model No. . . . . FE IW 18V/T650C
Input . . . . . 100V~240V, 50-60Hz, 80W
Charging voltage 20V

Battery

Model No. . . . . FE IW 18V/T650B3 (3.0Ah)
. . . . . FE IW 18V/T650B4 (4.0Ah)
. . . . . FE IW 18V/T650B5 (5.0Ah)

POWER TOOLS
Lithium
Quality product

Model No. : FE IW 18V/T650

6096-795515

GENERAL SAFETY RULES

Thank You For Buying A FE Powertools tool
Manufactured to Fe Powertools high standard for dependability, properly cared for, it will give you years of trouble free performance.

Important:
Carefully read through this entire owner's manual before using your new tool. Pay close attention to the Rules for Safe Operation. Warnings and Cautions. Use your tool properly and only for what it is intended.
The use of safety symbols in this manual it to attract your attention to possible dangers. The safety symbols, and the explanations with them, require your full understanding. The safety warnings do not by themselves eliminate any danger, nor are they substitutes for proper accident prevention measures.

SYMBOL : 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
Safe operation of this tool requires that your read and fully understand this owner's manual and all labels affixed to the tool.
Learn its applications and limitations as well as the potential hazards peculiar to a power tool. Keep this manual readily available for future reference.

IMPORTANT
Servicing of a tool requires extreme care and know ledge and should be performed only by a qualified service technician. For service or repair contact and Authorize Service Center.

CAUTION : Do not attempt to operate this tool until your have thoroughly read and completely understood all instructions, safety rules, etc., contained in this manual. Failure to comply can result in accidents involving fire, electric shock, or serious personal injury. Save the Owner's Manual and review frequently for continuing safe operation and for instructing others who may use this tool.

WARNING : When using power tools, basic safety precautions should always be followed to reduce the risk of fire, electric shock, and personal injury, including the precautions following.

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

GENERAL POWER TOOL SAFETY WARNINGS

Save all warnings and instructions for future reference
The term "power tool" in the warnings refer to your mains operated (corded) power tool or battery operated (cordless) power tool.

1) SAFETY

a) **Keep work area clean and well lit.** Cluttered and dark areas invite accidents.

b) **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.

c) **Keep children and bystanders away while operating a power tool.** Distractions can cause you to lose control.

2) Electrical safety

a) **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.

b) **Do not expose power tools to rain or wet conditions.** Water entering a power tool will increase the risk of electric shock.

3) Personal safety

a) **Stay alert, watch what you are doing and use common sense when operating a power tool. Do not use a power tool while you are tired or under the influence of drugs, alcohol or medication.** A moment of inattention while operating power tools may result in serious personal injury.

b) **Use safety equipment. Always wear eye protection.** Safety equipment such as dust mask, non-skid safety shoes, hard hat, or hearing protection used for appropriate conditions will reduce personal injuries.

c) **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.

d) **Do not overreach. Keep proper footing and balance at all times.** This enables better control of the power tool in unexpected situations.

e) **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.

f) **If devices are provided for the connection of dust extraction and collection facilities, ensure these are connected and properly used.** Use of these devices can reduce dust- related hazards.

4) Power tool use and care

a) **Do not force the power tool. Use the correct power tool for your application.** The correct power tool will do the job better and safer at the rate for which it was designed.

b) **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.

c) **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.

d) **Maintain power tools. Check for misalignment or binding of moving parts,breakage of parts and any other condition that may affect the power tools operation. If damaged,have the power tool repaired before use.** Many accidents are caused by poorly maintained power tools.

e) **Use the power tool, accessories and tool bits 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 intended could result in a hazardous situation.

5) Battery tool use and care

a) **Recharge only with the charger specified by the manufacturer.** A charter that is suitable for one type of battery pack may create a risk of fire when used with another battery pack.

b) **Use power tools only with specifically designated battery packs.** Use of any other battery packs may create a risk of injury and fire.

c) **When battery pack is not in use, keep it away from other metal objects, lie 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.

d) **Under abusive conditions, liquid may be ejected from the battery; avoid contact. If contact accidentally occurs, flush with water. If liquid contacts eyes, additionally seek medical help.** Liquid ejected form the battery may cause irritation or burns.

6) Service

a) **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.

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

IMPORTANT SAFETY INSTRUCTIONS FOR CHARGER

Save These Instructions

Input: Only use the rated voltage marked in charger.

1. Charging voltage: 20V
   Quick charge current : 3A ± 0.3A
   Maintaining charge : 200mA ± 50mA
   Battery charging time at 20˚C
   3.0Ah.....Approx ≤ 60 min.
   4.0Ah.....Approx ≤ 90 min.
   5.0Ah.....Approx ≤ 100 min.
   NOTE: The charging time may vary according to an ambient temperature and power source voltage.
2. Before charging, study the instruction sheet;
3. Disconnect the supply before making or breaking connections to the battery;
4. For indoor use or do not expose to rain (for ordinary battery chargers).
5. Correct use: Universal fast chargers are to be used exclusively for charging 18V Fe Powertools serious rechargeable battery packs. Any other may result in risk of fire, electric shock or electrocution.
   The user bears sole responsibility for any damage caused by inappropriate use.
   The generally recognized accident prevention regulations and the safety instructions which accompany them must be adhered to.

Battery Charger Model No.	Battery Pack	
	Model	Volt
FE IW 18V/T650C	FE IW 18V/T650B3	18V, 3.0Ah
	FE IW 18V/T650B4	18V, 4.0Ah
	FE IW 18V/T650B5	18V, 5.0Ah
• Do not try to charge non-chargeable batteries with this charger.		

6. **SAVE THESE INSTRUCTIONS.** This manual contains important safety and operating instructions for battery charger.
7. Before using the battery charger, read all instructions and cautionary markings on (1) the charger, (2) the battery, and (3) the product using battery.
8. The charger is specifically designed to charge the FE Powertools battery as listed in the preceding table. Do not attempt to charge any other battery with this charger.
9. **CAUTION:** Danger of explosion may happen if battery is incorrectly replaced. Replace only with the same or equivalent type.
10. Do not expose charger to rain or snow. Do not use in damp or wet locations.
11. 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.

12. To reduce risk of damage to electric plug and cord, pull by plug rather than cord when dis-connecting charger.
13. Make sure cord is appropriately located so that it will not be stepped on, tripped over, or otherwise subject to damage or stress.
14. Do not operate charger with damaged cord or plug. Please replace them immediately should any damage found.
15. Do not operate charger if it has received as harp blow, been dropped, or otherwise damaged in any way; take it to an authorized Service Station.
16. Do not disassemble charger; take it to an authorized Service Station when service or repair is required. Incorrect reassembly may result in a risk of electric shock or fire.
17. To reduce risk of electric shock, unplug charger from outlet before attempting any maintenance or cleaning.
18. Charging must only be performed when the battery temperature is between 32°F (0°C) and 113°F (45°C).
19. The charger vents shall be strictly prohibited to be covered or clogged by any foreign object.
20. The charger is designed to operate on standard household electrical power. Do not attempt to use it on any other voltage!
21. WARNING: The parts inside the charger are live and can create a shock hazard! Do not stick anything in the battery charger terminal slots!
22. Unplug the charger immediately if there is any sign of smoke or flame!
23. Do not drill into the housing of the charger or battery!
24. Keep the charger away from children!

SAFETY PRECAUTIONS WHEN USING CHARGER AND BATTERY

1. Do not charge battery when temperature is below 32°F (0°C) or above 113°F (45°C). The most suitable temperature for charging is that of 20~25˚C (68~77˚F).
2. Never attempt to connect two chargers together.
3. The charger is designed to operate on standard household electrical power. Do not attempt to use it on any other voltage.
4. Do not insert foreign matter into the hole reserved for the battery in charger stand.
5. Do not charge by means of an engine generator or DC power source.
6. Do not disassemble the battery and charger by yourself. Incorrect reassembly may result in a risk of electric shock, electrocution or fire. Having the battery and charger repaired by professional engineer.
7. Do not store the tool and battery in locations where the temperature may reach or exceed 140˚F (60˚C), such as outside sheds or metal buildings in summer.
8. Do not incinerate the battery, even if it is severely damaged or completely worn out. The battery may explode in fire.
9. Battery leakage may occur under conditions of extreme usage or temperature. If liquid comes in contact with skin, wash quickly with soap and water, then lemon juice or vinegar. If liquid gets in your eyes, wash with a strong solution of boric acid and seek medical advice immediately.
10. Never short-circuit the rechargeable battery. Short circuiting the battery will cause a great electric current and over heat. It results in burn or damage the battery.
11. Charge battery only with the charger provided.
12. The battery for this tool has been shipped in a low charge condition, therefore, you should charge it prior to use.
13. Do not insert foreign object into the air ventilation slots of the charger. Inserting metal objects or inflammable into the slots will result in electrical shock hazard or damaged charger.
14. This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.
15. Children should be supervised to ensure that they do not play with the appliance.
16. Do not dispose of electrical appliances as unsorted municipal waste, use separate collection facilities.
17. Contact your local government for information regarding the collection systems available.
18. If electrical appliances are disposed of in landfills or dumps, hazardous substances can leak into the groundwater and get into the food chain, damaging your health and well-being.
19. When replacing old appliances with new ones, the retailer is legally obligated to take back your old appliance for disposal at least for free of charge.
20. If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.
21. Dispose of batteries properly according to federal, state and local laws. Do not throw battery into a fire! Do not immerse batteries in water! Do not dispose of in landfills!

WARNING : If any parts are missing, do not operate tool until the missing parts are replaced. Failure to do so could result in possible serious personal injury.

- **DISPOSAL OF THE EXHAUSTED BATTERY**

WARNING : Do not attempt to disassemble the battery pack. Fire or injury may result.

For safety and to preserve natural resources, please recycle or dispose of properly. This Product Contains Lithium Ion Battery.
Must Be Disposed Of Properly. 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.

- **BATTERY PACK PREPARATION FOR RECYCLING**

WARNING : Upon removal, cover the battery pack's terminals with heavy duty adhesive tape. Do not attempt to destroy or dis- assemble the battery pack or remove any of its components. Do not touch both terminals with metal objects and body parts, as short- circuit may result. Keep away from children. Failure to comply with these warnings could result in fire and/or serious injury.

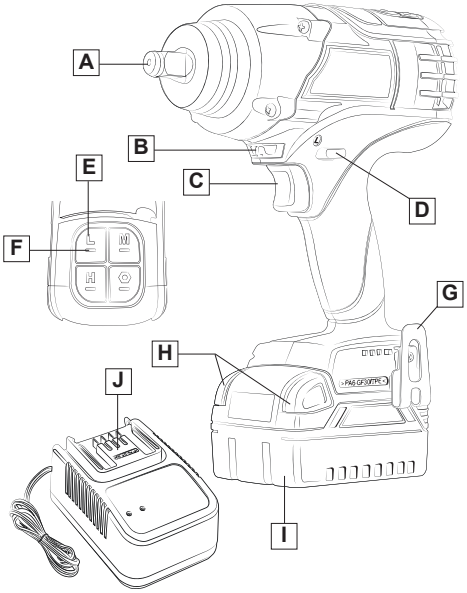
PRECAUTIONS ON USING YOUR CORDLESS TOOL

This product contains Lithium Ion batteries which must be disposed of properly.

1. Be aware that this tool is always in an operating condition, because it does not have to be plugged into an electrical outlet.
2. Fully charge the battery for better operation.
3. Be sure the battery is snapped in place.
4. When not in use, lock the switch.
5. When operating at a high place, be aware of things below and around you.
6. This unit features the overload protection design. When the unit overload or stall, the power would be cut-off automatically. This will protect the motor, switch and battery.
7. This unit features a battery temperature detective sensor. If the battery exceeds the safety working temperature, the unit would shut-off automatically. Once the temperature dropped back to the safe temperature zone, the unit would function normally again.
8. This unit features a battery over-discharge protection system which can prolong the battery's lifespan.

OPERATION INFORMATION

WARNING : Before attempting to use any tool, make sure your are familiar with all operating features and safety **r**equirements.



A. Anvil
B. LED Light
C. Trigger
D. Forward/Reverse level
E. 4 Stage Impact Power Selection and Battery Capacity Indicator Light
F. 4 Stage impact power selection button
G. Belt Hook
H. Battery Pack
I. Battery Clip
J . Charger

- **INSTALLING OR REMOVING BATTERY PACK**

1. Hold the tool and the battery pack firmly when installing or removing battery pack. Failure to hold the tool and the battery pack firmly may cause them to slip off your hands and result in damage to the tool and battery pack and a personal injury.

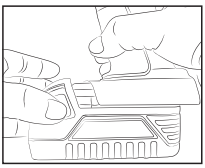
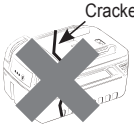


Fig. 1

2. Always switch off the tool before installing or removing of the battery pack.
3. To remove battery pack, press the battery clip, and pull out. To install the battery pack, align the tongue on the battery pack with the groove in the housing and slip it into place. Always insert it all the way until it locks in place with a little click. If not, it may accidentally fall out of the tool, causing injury to you or someone around you. (Fig. 1)

NOTE: Do not use force when installing the battery pack. If the cartridge does not slide in easily, it is not being inserted correctly.

• CHARGING THE BATTERY PACK



DANGER:
If battery pack case is cracked or damaged, do not insert into charger. Danger of electric shock or electrocution.

1. The battery pack for this tool is supplied in a low charge condition to prevent possible problems, therefore, you have to charge the battery before first use.
2. Charge battery pack only with the charger provided.
3. Using an other charger can cause severe damage or even cause battery to explode from the work piece and determine the reason for jamming.
4. Connect the charger to a power outlet. Place the battery pack in the charger aligning raised rib on the battery pack with the groove in the charger. (Fig. 2)

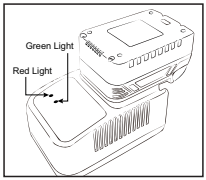


Fig. 2

NOTE:

- Lithium battery does not have memory effect, therefore to prolong the battery life please fully charged the battery before storage. This will reduce battery self discharging characteristics. If the voltage of the battery is too low, it'll automatically lock itself. If the tool feels lack of power, please stop the operation and charge the battery immediately. If the battery is stored more than 3 months, please charge the battery first before operation.
- If the tool does not function, please clear all debris and restart again. If malfunction continues malfunctions, please remove the battery immediately and contact the local service dealers for assistance.
- The battery pack will become slightly warmer while charging. This is normal and does not indicate a problem.
- Do not place charger in an environment either extreme hot or cold. It will work best at normal room temperature.
- When the battery is fully-charged, unplug your charger from the power supply and remove the battery pack from the charger.

CAUTION : To prevent damage to the battery pack, remove the battery pack immediately from the charger when no charger LED lights. Return battery pack and charger to your dealer for checking or replacing. Do not insert a battery pack into a damaged charger, it may damage your battery pack.

• BATTERY CAPACITY INDICATOR

1. The tool is applied with the battery capacity indicator (A) on the top pad for easy view. (Fig. 3)
2. The remaining battery power is shown as lights by three alphabetic symbols when the trigger pressed; when the trigger released, the button stays lighted is shown the speed mode the tool performs and will last approximately 60 seconds.
3. Either the indicator light blinks or none indicator lights, the battery capacity has run out, so the tool does not operate. In these cases, charge the battery or replace the dead battery by a fully-charged on.
4. When two or more indicator lights do not light even after charging is complete, the battery has reached the end of its service life.

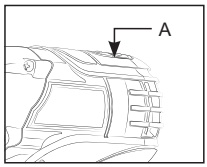


Fig. 3

INDICATOR LIGHTS				
Lighted / OFF / Blinking				
≥ 60%	30~60%	≤ 30%	≤ 10% (Charge the battery)	Malfunction

NOTE:

- The indicated capacity may be lower than the actual level during use of the tool.
- Depending on the conditions of use and the ambient temperature, the indication may differ slightly from the actual capacity.

• CHARGER LED INDICATION

CHARGER STANDBY	Red light steady on	● ○	—	Stand by
WHILE CHARGING	Red and green light steady on	● ●	=	Charging
	Red light blinking	✱ ○	·····	Battery too hot Battery too cold
CHARGING COMPLETE	Red light steady on green light blinking	● ✱	— ·····	Full charged
MALFUNCTION BATTERY	Red and Green lights blink alternately	✱ ✱	·····	Replace the battery

NOTE: The battery will not reach full charge after the first charge. Allow several cycles (drilling followed by recharging) for them to become fully charged.

- **FORWARD/REVERSE LEVEL**

WARNING : Always check the direction of rotation before operation.

This determines the direction of rotation of the chuck, ie. clockwise or anti-clockwise.

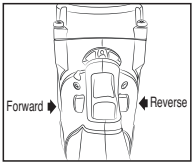


Fig. 4

To alter the direction of rotation stop the drill then push the selection lever to the left of right. When the lever is in the “Forward” position the chuck will rotate clockwise. When the lever is in the “Reverse” position the chuck will rotate anti-clockwise. Before operation check that the level is set in the required position. (Fig. 4)

WARNING : Use the reversing switch only after the tool comes to a complete stop. Changing the direction of rotation before the tool stops may damage the tool.

When not operating the tool, always set the reversing switch lever to the neutral position.

- **TRIGGER**

1. To start the tool, simply press the trigger. Tool speed is increased by increasing pressure on the trigger. Release the trigger to stop. (Fig. 5)

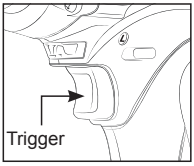


Fig. 5

2. When the trigger is depressed the chuck will rotate (provided the forward/ reverse level is set in the forward or reverse position). The trigger can be locked in the OFF position. This helps reduce the possibility of accidental starting when not in use. To lock trigger, place selection lever in the centre position.

- **HOW TO OPERATE THE IMPACT POWER SELECTION**

1. The impact power selection button is used to adjust the torque, rotation speed (RPM), and impact speed (IPM) for different application. Please pay attention. Power modes are not able to be switched when tool being run.

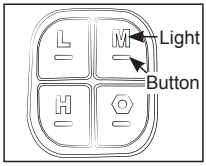


Fig. 6A

2. Before you selecting the mode on the top pad, please click out the trigger to let electric current through the pad for your selection.

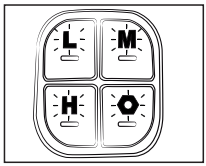


Fig. 6B

3. L/M/H three modes only be selected at forward rotation, L/M/H three modes and ⬢ mode (R mode) are selected at reversed rotation. When the letter you press is lighted, the tool is ready to work. (Fig. 6A)
4. The lighted alphabetic symbols during operation are shown as battery capacity the tool remains . The lighted alphabetic when trigger released is shown what speed mode the tool stays.
5. When 4 lights flash at once it symbols either the tool or the battery failed. Please check carefully. (Fig. 6B)

INDICATOR LIGHTS		
■ Lighted □ OFF		
Impact force grade displayed on panel	Approx. rpm / ipm / torque	Work
	0~1,900 rpm 0~2,400 ipm 650 Nm	Heavy duty fastening
	0~1,200 rpm 0~1,600 ipm 400 Nm	Moderate duty fatening
	0~900 rpm 0~1,200 ipm 200 Nm	Light duty fastening
	Automatic adjustment by PCB	"R Mode" for nuts in case fly out at hgiht speed

- **LED LIGHT**

WARNING : Don’t stare at the LED light, nor put the light illuminates people eyes. If eyes focus on the light for a while, may cause pains.

1. Equipped with a LED light indicated the front of bits.
2. Light can be on with slightly pressing the trigger. (Fig. 7A)
3. The LED light will be turned off automatically after the tool is stopped by 15 seconds.

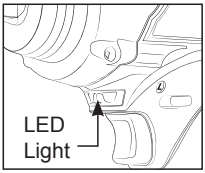


Fig. 7

- **BELT HOOK**

CAUTION : When installing the hook, tighten the screw firmly.Failure to do so may cause the breakage of the toolor personal injury.

1. The belt hook is convenient for temporarily hanging the tool. This can be installed on either side of the tool.
2. To install the belt hook, insert it into a groove in the tool housing on either side and then secure it with a screw. To remove, loosen the screw and then take it out. (Fig. 8A & Fig. 8B)
3. After installing the belt hook, make sure that it is screwed firmly.

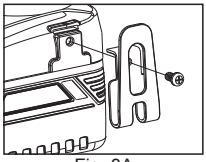


Fig. 8A

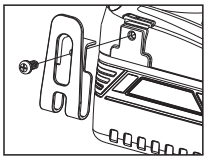


Fig. 8B

- **INSTALLING AND REMOVING SOCKET**

NOTE : Always be sure that the tools is switched off and the battery pack is removed before installing or removing the socket.

1. Always use the correct size socket for bolts and nuts. An incorrect size socket will result in inaccurate and inconsistent fastening torque and/or damage to the bolt or nut.
2. To attach a socket, align the accessory with the anvil and push it firmly over the retaining ring. (Fig. 9A)
3. To remove the socket, pull the socket off the anvil. (Fig. 9B)

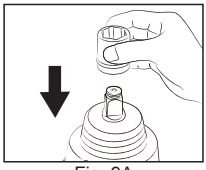


Fig. 9A

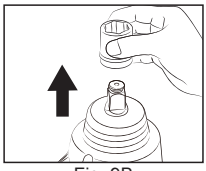


Fig. 9B

MAINTENANCE INFORMATION

WARNING : Always be sure that the tool is switched off and battery is removed before attempting to perform inspection or maintenance on the tool. Failure to switch off and remove the battery may result in serious personal injury from accidental start-up.

- **CLEANING**

Remove the battery.

1. Keep the air vents free of obstructions. Do not spray, wash, or immerse the air vents in water.
2. Wipe off the housing and the plastic components using a moist, soft cloth. Do not use strong solvents or detergents on the plastic housing or plastic components. Certain household cleaners may cause damage, and may cause a shock hazard.

- **MAINTENANCE**

1. Place switch in OFF position and remove the battery before the appliance is serviced, cleaned, or maintenance is performed.
2. Check if device loose, parts damaged such.
3. Please storage locked tools in dry location where the children cannot touch when you didn't use tool.
4. Only use recommended spare parts and accessories from manufacturer for replacement.
5. Before and after using, check and maintain tools regularly. Fix tool via our authorized center.
6. Keep hands dry, clean and no greasiness and lubricant.
7. Please don't install battery pack into tool when storage.

WARNING : Always wear safety goggles or safety glasses with side shields when operating tool. Failure to do so could result in objects being thrown into your eyes, resulting in possible serious injury.

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