

MAX

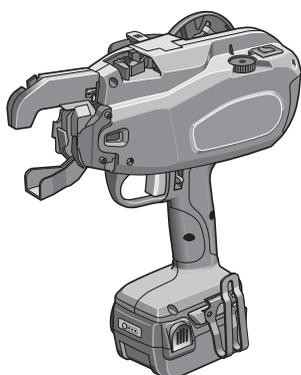
RE-BAR-TIER

RB518

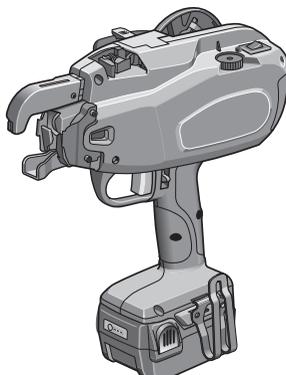
RB398

RB218

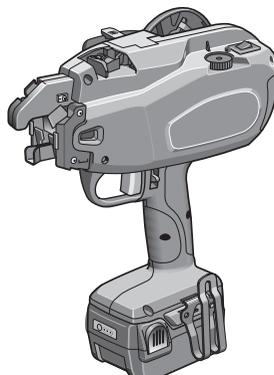
RE-BAR TYING TOOL



RB518



RB398



RB218

OPERATING AND MAINTENANCE MANUAL



WARNING

BEFORE USING THIS TOOL, STUDY THIS MANUAL TO ENSURE SAFETY WARNING AND INSTRUCTIONS. KEEP THESE INSTRUCTIONS WITH THE TOOL FOR FUTURE REFERENCE.

INDEX

DEFINITIONS OF SIGNAL WORDS

- WARNING:** Indicates a hazardous situation which, if not avoided, could result in death or serious injury.
- CAUTION:** Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.
- NOTICE:** Indicates a property damage message.

OPERATING AND MAINTENANCE MANUAL

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BEFORE USING THIS TOOL, STUDY THIS MANUAL TO ENSURE SAFETY WARNING AND INSTRUCTIONS. KEEP THESE INSTRUCTIONS WITH THE TOOL FOR FUTURE REFERENCE.

WARNING

1. GENERAL POWER TOOL SAFETY WARNINGS



WARNING

READ ALL SAFETY WARNINGS AND ALL 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.

1. WORK AREA SAFETY

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

2. ELECTRICAL SAFETY

- **Power tool plugs must match the outlet. Never modify the plug in any way. Do not use any adapter plugs with earthed (grounded) power tools.** Unmodified plugs and matching outlets will reduce risk of electric shock.
- **Avoid body contact with earthed or grounded surfaces, such as pipes, radiators, ranges and refrigerators.** There is an increased risk of electric shock if your body is earthed or grounded.

- **Do not expose power tools to rain or wet conditions.** Water entering a power tool will increase the risk of electric shock.
- **Do not abuse the cord. Never use the cord for carrying, pulling or unplugging the power tool. Keep cord away from heat, oil, sharp edges and moving parts.** Damaged or entangled cords increase the risk of electric shock.
- **When operating a power tool outdoors, use an extension cord suitable for outdoor use.** Use of a cord suitable for outdoor use reduces the risk of electric shock.
- **If operating a power tool in a damp location is unavoidable, use a residual current device (RCD) protected supply.** Use of an RCD reduces the risk of electric shock.

3. 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 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.



- **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 energizing power tools that have the switch on invites accidents.

- **Remove any adjusting key or wrench before turning the power tool on.** A wrench or a key left attached to a rotating part of the power tool may result in a 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 these are connected and properly used.** Use of dust collection can reduce dust-related hazards.

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

5. 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 type of 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, additionally seek medical help. Liquid ejected from the battery may cause irritation or burns.

6. 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.



- **Do not use the power tool in the rain, where water is splashing, in a wet place, or in a damp place.** Using the tool in these or similar conditions will increase the risk of electric shock, dangerous malfunction, and overheating.



- **DO NOT DISPOSE OF BATTERY PACKS/BATTERIES INTO FIRE OR WATER.** Battery packs/batteries should be collected, recycled or disposed of in an environmental-friendly manner.



- **PROTECT THE BATTERY AGAINST HEAT, ALSO AGAINST CONTINUOUS SUN IRRADIATION AND FIRE.** There is danger of explosion.



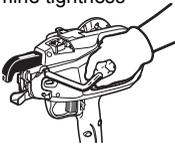
- **CHARGE THE BATTERY PACK IN A TEMPERATURE RANGE 41°F (5°C) TO 104°F (40°C)**



- **DO NOT DISPOSE OF POWER TOOLS INTO HOUSEHOLD WASTE.** According to the European Guideline 2002/96/EC for Waste Electrical and Electronic Equipment and its implementation into national right, power tools that are no longer usable must be collected separately and disposed of in an environmentally correct manner.
- **DEFFECTIVE OR DEAD OUT BATTERY PACKS/BATTERIES MUST BE RECYCLED ACCORDING TO THE GUIDELINE 2006/66/EC.**

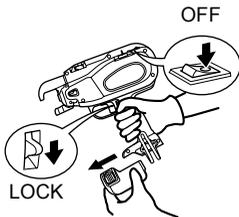
2. RB518/398/218 SAFETY FEATURES

Examine tightness



1. INSPECT THE PARTS BEFORE MOUNTING THE BATTERY PACK

- Examine the screws to make sure they are securely tightened. Incomplete tightening may result in an accident or breakage. If a screw is loose, retighten it completely.
- Inspect parts for damage. Parts will wear over periods of use. Look also for missing and defective parts and for parts of poor quality. If a part must be replaced or repaired, purchase the replacement part at an authorized MAX Co., Ltd. distributor. Use only genuine authorized replacement parts.



2. BE SURE TO SET THE MAIN SWITCH TO OFF, TO LOCK THE TRIGGER, AND DETACH THE BATTERY PACK WHEN CHANGING THE BATTERY PACK, WHEN REPLACING OR ADJUSTING THE TIE-WIRE, WHEN ABNORMALITIES OCCUR, AND WHEN THE EQUIPMENT IS NOT BEING USED

Leaving the equipment switched on in these situations may cause breakdowns or damage.



3. KEEP FINGERS AND BODY PARTS CLEAR OF THE FEEDER ARM AND CURL GUIDE AT ALL TIMES

Failure to do so may result in serious injury.



4. KEEP FINGERS AND BODY PARTS AWAY FROM THE TIE-WIRE REEL WHEN TOOL IS IN OPERATION

Failure to do so may result in serious injury.



5. DO NOT POINT THE TOOL AT ANYONE

Personal injury may result if the tool catches an operator or anyone working near him. While working with the tool, be extremely careful not to bring hands, legs, and other body parts near the arm of the tool.



6. WHEN THE TOOL IS NOT IN OPERATION KEEP YOUR FINGERS OFF THE TRIGGER

Failure to do so may cause accidental tying, leading to serious injury.



7. NEVER OPERATE THE TOOL UNDER ANY ABNORMAL CONDITION

If the tool is not in good working order, or if any abnormal condition is noticed, switch it off immediately (set the Main switch at OFF), lock the Trigger and have it examined and repaired.



8. AFTER BATTERY INSTALLATION IF THE TOOL OPERATES WITHOUT THE TRIGGER BEING PULLED OR THE OPERATOR NOTICES UNUSUAL HEAT, SMELL, OR SOUND, DISCONTINUE OPERATION

Failure to do so may lead to serious injury. Return to dealer for safety inspection.



9. NEVER MODIFY THE TOOL

Modifying the tool will impair performance and operating safety. Any modification may lead to serious injury and void the tool warranty.



10. MAINTAIN THE TOOL IN GOOD OPERATING CONDITION

To secure operating safety and ensure top performance, keep the tool free of wear and damage. Also keep the tool's hand grip dry and clean, especially free of oil and grease.

11. USE ONLY THE AUTHORIZED BATTERY PACK

If the tool is connected to a power supply other than the authorized pack, such as a rechargeable battery, a dry cell, or a storage battery for use in automobiles, the tool may be damaged, break down, overheat, or even catch on fire. Do not connect this tool to any power supply except the authorized battery pack.

12. TO ENSURE MAXIMUM PERFORMANCE, FULLY CHARGE THE BATTERY BEFORE USE

A new battery pack or one not used for extended periods may have self-discharged and thus may need recharging to restore it to a fully charged condition. Before operating the tool, make sure to charge the Battery pack with the designated MAX Battery charger.

13. BATTERY CHARGING PRECAUTION

1 Use only MAX Battery charger and MAX Battery Pack

Failure to do so may cause the Battery to overheat or catch fire leading to serious injury.

AC
120V



2 Charge the Battery from an AC 120V wall socket

Failure to do so may result in overheating, or inadequate charging possibly causing serious injury.



3 Never use a transformer



4 Never connect the Battery charger to an engine generator direct-current power supply

The charger will break down or be damaged from burning.



5 Avoid charging the Battery pack in the rain, in a damp place, or where water is splashing

Charging a damp or wet Battery pack will cause an electric shock or a short circuit that may lead to damage from burning and even the tool catching on fire.



6 Do not touch the power cord or plug with a wet hand or glove

This may cause injury from electric shock.

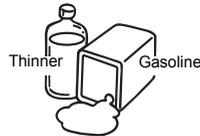


7 Do not put a cloth or any other cover on the Battery charger while the Battery pack is being charged

This will cause overheating and damage from burning, or the Charger may even catch fire.



8 Keep the Battery pack and Battery charger away from heat and flames

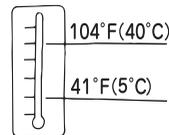


9 Do not charge the Battery pack near flammable materials

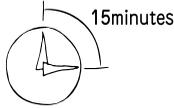


10 Charge the Battery pack in a well ventilated place

Avoid charging the Battery pack where it will be in direct sunlight.



11 Charge the Battery pack in a temperature range of 41°F (5°C) to 104°F (40°C)



12 Avoid continual use of the Battery charger

Rest the Charger for 15 minutes between charges to avoid functional trouble with the unit.



13 Any objects that block the ventilation holes or Battery pack receptacle may cause electric shock or functional troubles

Operate the charger free of dust or other foreign materials.



14 Handle the power cord carefully

Do not carry the Battery charger by its power cord. Do not use the power cord to disconnect it from a wall socket; this will damage the cord and break the wires or cause a short circuit. Do not let the power cord contact sharp edged tools, hot materials, oil, or grease. A damaged cord must be repaired or replaced.

15 Do not charge non rechargeable batteries with this charger.

16 This charger is not intended for use by children or disabled persons without supervisor.

17 Children should be supervised to ensure that they do not play with the charger.



18 Put a pack cap on the terminal of the Battery pack

When the Battery pack is not in use, put a pack cap on its terminal to prevent short circuits.



19 Do not let the terminal (metal component) of the Battery pack short-circuit

A short circuit in the terminal will generate a large current, causing to overheat the Battery pack and become damaged.

20 Do not leave or store the tool in a vehicle or in direct sunlight during summer. Leaving the tool in high temperature conditions may cause the battery pack to deteriorate.

21 Do not store a fully discharged battery pack. If a fully discharged battery pack is removed from the system and left for a long period of time, it may become damaged. Recharge the battery immediately when it has been discharged.

14. WEAR SAFETY GLOVES WHILE OPERATING THE TOOL

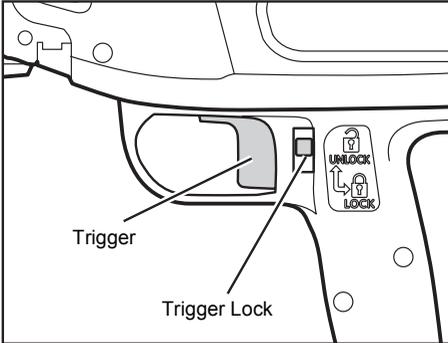
The finish tie has sharp edges. To avoid serious injuries, be careful not to touch the sharp edges. MAX recommends wearing safety gloves while operating the tool.

15. PRIOR TO USING THE TOOL.



WARNING

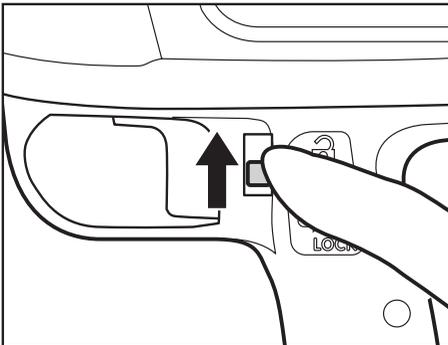
- Make sure that the safety features function properly. If they do not, avoid using the tool.



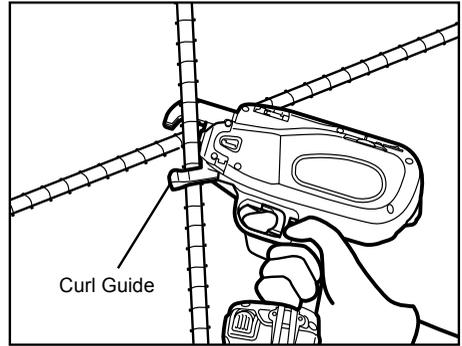
Trigger Lock

The Trigger can be locked preventing the tool from operating for safety. Always keep the Trigger locked when not in use.

Unless you are at tying work, set the trigger lock to the position of LOCK and remove a battery pack. When you start tying work, set it to the position of UNLOCK.



Pull to the left slightly and upwards to UNLOCK.

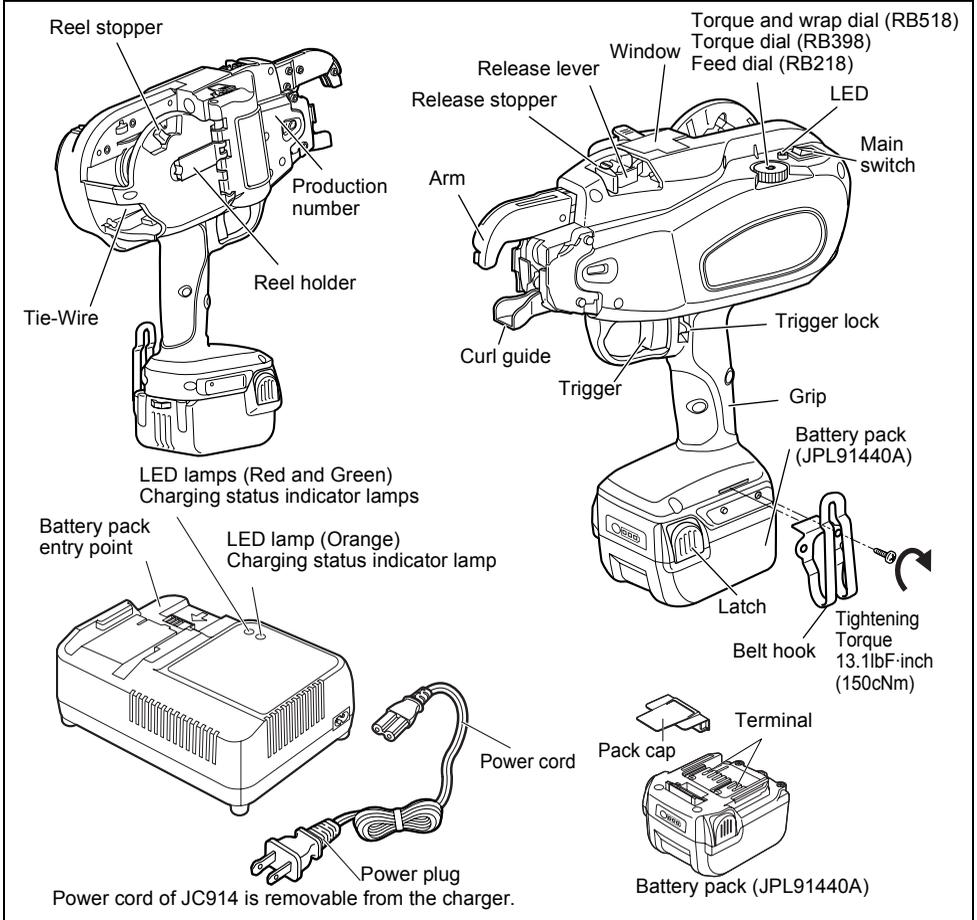


Curl Guide

When the Curl Guide is opened, it will emit a beeping sound and the tool does not operate.

3. SPECIFICATIONS AND TECHNICAL DATA

1. NAME OF PARTS



2. TOOL SPECIFICATIONS

PRODUCT NO.	RB518	RB398	RB218
WEIGHT	5.3lbs (2.4kg) (Battery included)	5.3lbs (2.4kg) (Battery included)	5.3lbs (2.4kg) (Battery included)
HEIGHT	12" (305mm)	12" (305mm)	12" (305mm)
WIDTH	4-1/8" (105mm)	4-1/8" (105mm)	4-1/8" (105mm)
LENGTH	12" (305mm)	11-3/8" (290mm)	10-5/8" (270mm)
WRAPS PER TIE	3 or 4 Wraps/tie	3 Wraps/tie	
BATTERY	Li-ion14.4V/(JPL91440A)		
ACCESSORIES	Battery pack JPL91440A (1pc.) Battery Charger JC914 Carrying case, Belt hook	Battery pack JPL91440A (1pc.)	Battery pack JPL91440A (2pcs.)
Operating temperature	14°F to 104°F (-10°C to 40°C)		
Humidity	80% RH or less		

<Battery charger>

Product name	LITHIUM ION BATTERY CHARGER
Product code	JC914
Input	AC120 V 60 Hz 2.6 A 160W
Output	DC14.4V 7.5A
Weight	3.3 lbs (1.5 kg)
Operating temperature range	41 °F to 104 °F (5 °C to 40 °C)
Operating humidity range	80% RH or less

<Battery pack>

Product name	LITHIUM ION BATTERY PACK
Product code	JPL91440A
Battery type	Lithium ion battery
Nominal voltage	DC14.4 V (3.6V x 4 cells)
Nominal capacity	3.9 Ah (3,900 mAh)
Charging time (When charger JC914 is used)	Quick charging - Approximately 40 minutes (Approximately 90% of capacity) Full charging - Approximately 60 minutes (100% of capacity)
Accessories	Pack cap (For preventing short circuit)
Weight	1.1 lbs (0.5 kg)
Charging temperature	41 °F to 104 °F (5 °C to 40 °C)
Operating temperature	32 °F to 104 °F (0 °C to 40 °C)
Operating humidity range	80% RH or less

3. WIRE SPECIFICATIONS

MODEL	RB518		RB398		
TIE WIRE	TW898	TW898-PC	TW898	TW898-EG	TW898-PC
DIAMETER	21 GA (0.8mm)	21 GA (0.8mm)	21 GA (0.8mm)	21 GA (0.8mm)	21 GA (0.8mm)
TIES PER COIL	(3 Wraps/tie) Approx. 90 ties (4 Wraps/tie) Approx. 75 ties	(3 Wraps/tie) Approx. 80 ties (4 Wraps/tie) Approx. 65 ties	Approx. 120 ties	Approx. 110 ties	Approx. 105 ties
TIES PER CHARGE	(3 Wraps/tie)Approx. 2,400 ties (4 Wraps/tie)Approx. 2,200 ties		Approx. 2,600 ties		

MODEL	RB218	
TIE WIRE	TW898	TW898-EG
DIAMETER	21 GA (0.8 mm)	21 GA (0.8 mm)
TIES PER COIL	Approx. 170-210 ties	Approx. 155-190 ties
TIES PER CHARGE	Approx. 3,000 ties	

BATTERY CHARGER:

Use only an authorized Battery charger, MAX JC914.

4. TECHNICAL DATA

① NOISE

Measured value according to EN 60745:
 A-weighted sound pressure level (LpA): 71dB
 Uncertainty (KpA):3dB
 A-weighted sound power level (LWA): 82 dB
 Uncertainty (KWA):3dB

② VIBRATION

Measured value according to EN 60745:
 Vibration total values (ah): 1.9 m/s²
 Uncertainty (K):1.5 m/s²

The following information:

- that the declared vibration total value has been measured in accordance with a standard test method and may be used for comparing one tool with another;
- that the declared vibration total value may also be used in a preliminary assessment of exposure.



WARNING

- that the vibration emission during actual use of the power tool can differ from the declared total value depending on the ways in which the tool is used; and
- of the need to identify safety measures to protect the operator that are based on an estimation of exposure in the actual conditions of use (taking account of all parts of the operating cycle such as the times when the tool is switched off and when it is running idle in addition to the trigger time.)

③ RADIATED EMISSION 30-1000 MHZ

Class B

④ Overvoltage category

category 1 according to IEC 60664-1

⑤ Pollution degree

degree 4 according to IEC 60664-1

⑥ Design guidelines

Machinery directive Annex 1, EN 60745-1, EN 60745-2-18

5. APPLICATIONS

- * Precast plants
- * Foundations
- * Commercial buildings
- * Road & bridge

6. APPLICABLE BAR SIZES

	Minimum	Maximum
	RB518 #5 × #5 (16mm × 16mm)	#7 × #8 (22mm × 25mm)
	RB398 #3 × #3 (10mm × 10mm)	#5 × #6 (16mm × 19mm)
	RB218 Mesh × Mesh	#3 × #3 (10mm × 10mm)

	Minimum	Maximum
	RB518 #4 × #4 × #3 (13mm × 13mm × 10mm)	#5 × #5 × #8 (16mm × 16mm × 25mm)
	RB398 #3 × #3 × #3 (10mm × 10mm × 10mm)	#4 × #4 × #4 (13mm × 13mm × 13mm)

	Minimum	Maximum
	RB518 #3 × #3 × #3 × #3 (10mm × 10mm × 10mm × 10mm)	#4 × #4 × #5 × #5 (13mm × 13mm × 16mm × 16mm)
	RB398 #3 × #3 × #3 × #3 (10mm × 10mm × 10mm × 10mm)	#4 × #4 × #4 × #4 (13mm × 13mm × 13mm × 13mm)

7. ABOUT PRODUCTION YEAR

This product bears production number in the body. The two digits of the number from left indicates the production year.

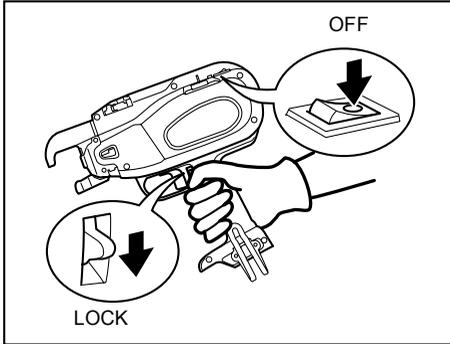
(Example)

15526035D

↓
Year 2015

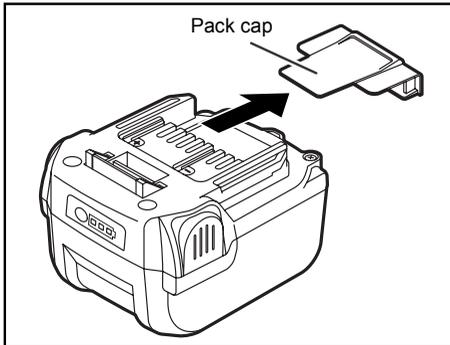
4. BATTERY INSTRUCTIONS

1. Charging

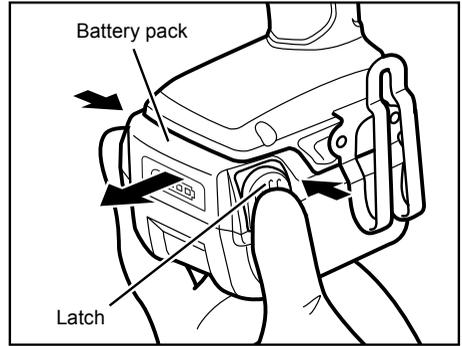


WARNING

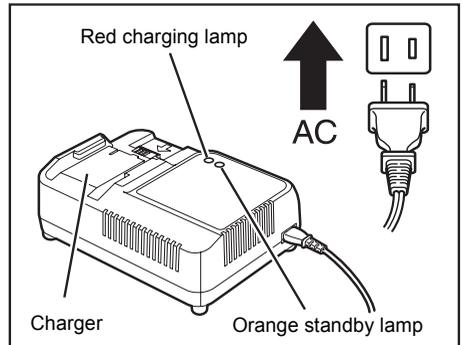
- Before removing the Battery pack from the tool, set the Main switch at OFF and lock the Trigger.



- ① A Pack cap that is used to prevent short circuits must be removed from the terminal of the Battery pack.



When charging the Battery pack, remove it by pushing on its latches from both sides while firmly holding the grip of the tool.



- ② Plug the charger into a wall socket (120V). The red light, a current-carrying indicator, will flash on and off with two short (Pipi) beep sounds.

When the orange standby light is lit

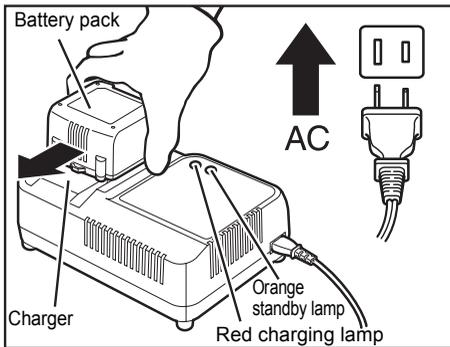
When the Battery pack is hot (after continuous use or exposure to direct sunlight) the Charger will automatically switch to standby to protect the Battery. The orange standby light will be lit until the Battery's temperature lowers to a safe level. The Battery will then be charged automatically.

When the Battery pack is at low temperature

When the Battery pack is at low temperature, its charging is automatically suspended until its temperature increases (higher than 41°F (5°C)), in order to protect it, even if it is set in the Charger. Leave the Battery pack at normal temperature in the room for some time, and then, charge it again.

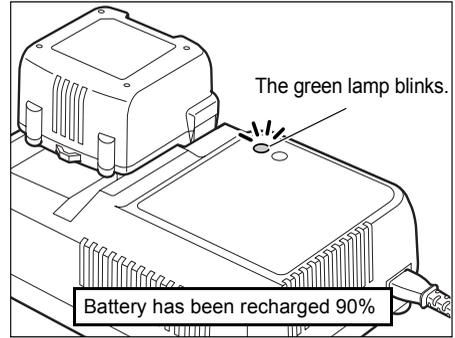
When the orange standby light blinks

This indicates the Battery cannot be charged. Unplug the Charger and check the charging receptacle. If there are any foreign objects, remove them with a soft dry cloth. If the orange light still blinks or there are no foreign objects, there may be a problem with the battery or charger. Return to dealer for service.



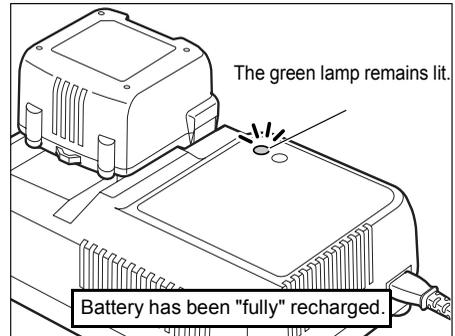
③ Charge the Battery pack.

- (1) Fully insert the Battery into the receptacle on the Charger until it sits securely on the end.
- (2) Charging will start automatically and will be indicated by the red charging light with beeps.
- (3) Charging time is approximately 40 minutes (90% capacity). This will vary by temperature and source voltage.
- (4) For batteries those are at low temperatures (50°F (10°C) or lower), charging time must be extended longer. When charging at low temperatures, both of the red and the orange charging light will be lit.

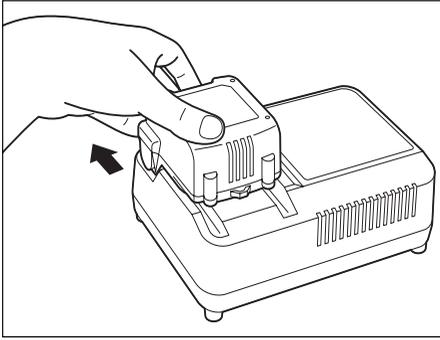


- ④ When the battery pack has been recharged, the "red" lamp turns off and the "green" lamp blinks.

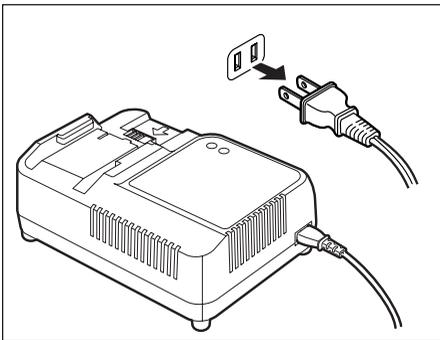
The "green" LED lamp blinks slowly and a long beep sounds for approximately 2 seconds. Now, the battery has been recharged to approximately 90% of its capacity. Quick charging takes approximately 40 minutes (however, the recharging time and capacity slightly change depending on the ambient temperature and power voltage).



You can use the battery pack when quick charging is complete. However, if you leave the battery pack on the charger, recharging will continue. When the battery is fully recharged (to 100% capacity), the "green" LED lamp lights up (and a long beep sounds for approximately 2 seconds).



(1) After you have recharged the battery pack, remove it from the charger.



(2) Unplug the charger power cord from the wall socket.

Regarding tying times per charge, a brand-new battery ties approximately 2,600 times per charge (RB518: Approx, 2,200-2,400 times per charge). The tying times per charge will be decreased gradually by repeated re-charge until the Battery becomes unusable. The tying times per charge depend on temperature and the Battery condition.

NOTICE

- When the battery pack is fully discharged, do not leave it for a long time without recharging. If the fully discharged battery pack is removed from the system and left for a long period of time, the battery pack may become damaged. Recharge the battery immediately when it has been discharged.
- Do not leave the battery pack on the charger. If the above is not observed, a weak current will continue to flow and the battery pack may become damaged. When recharging is complete, always remove the battery pack from the charger.

Battery pack /Charger breakdowns

If the following conditions occur, bring the Battery and Charger to your dealer.

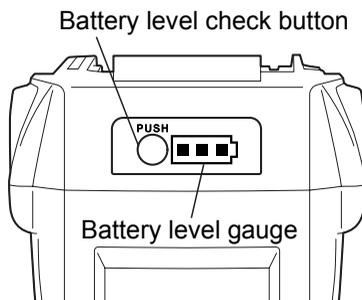
- The red charging lamp does not flash when the charger plug is inserted into main power source outlet (When the Battery pack is not inserted in the charger).
- Neither the red charging lamp nor the orange standby lamp lights or flashes when the Battery pack is inserted in the charger.
- The orange standby lamp does not change to the red charging lamp even after more than 1 hour. (except at low temperatures)
- The red charging lamp does not change from constant to flashing light even after more than 90 minutes. (except at low temperatures)

Indication of Quick Charger Lamps

Charger LED lamp	Buzzer sound	Recharging status	
Red lamp blinks. It blinks every second. ■ ■ ■ ■ ■ ■ ■ ■	The power cord is plugged into the receptacle. Two short beeps (Pi, pi)	The charger is powered.	The charger power cord is plugged into a wall socket.
Red lamp lights. It remains lit. ■ ■ ■ ■ ■ ■ ■ ■	The battery pack is mounted. One short beep (Pi)	The battery is being recharged.	Quick recharging continues.
The green lamp blinks. It blinks every second. ■ ■ ■ ■ ■ ■ ■ ■	The battery has been recharged. A long beep for approx. 2 seconds (Piii...)	The battery has been recharged.	The battery has been recharged to approx. 90% of its capacity. If you leave the battery pack on the charger, recharging will continue.
The green lamp lights up. It remains lit. ■ ■ ■ ■ ■ ■ ■ ■	Fully recharged. A long beep for approx. 2 seconds (Piii...)	Battery is "fully" recharged.	Recharged to 100% capacity.
The red lamp lights up. The orange lamp lights up. They remain lit. ■ ■ ■ ■ ■ ■ ■ ■	—	Protective charging	The battery is recharged with a low current to protect the charger and battery.
The orange lamp lights up. It remains lit. ■ ■ ■ ■ ■ ■ ■ ■	—	Standby	If the temperature of the battery pack is too high: Battery recharging starts automatically when the temperature drops below the limit. If the temperature of the battery pack is too low: Place the battery pack in a room temperature location for a while, then retry recharging it.
The orange lamp blinks. It blinks quickly (0.1 sec ON and 0.1 sec OFF). ● ● ● ● ● ● ● ●	Not possible to recharge. Short continuous beeps for approx. 10 seconds (Pi, pi, pi, pi,...)	Not possible to recharge.	Unable to recharge the battery. The battery pack slot is contaminated, or the battery pack has failed.

* For batteries those are at low temperatures (50°F (10°C) or lower), charging time must be extended longer.

About the Battery Level Indicator



- ① To check the battery level (excluding while charging or while operating the charging tool), press the battery level check button.
- ② The battery level gauge lights up according to the then battery level.

Battery level indication	Battery level: 0%	Battery level: about 0 to 10%	Battery level: about 10 to 40%	Battery level: about 40 to 70%	Battery level: about 70 to 100%
	All indicators OFF	One red indicator blinks	One red indicator ON	Two red indicators ON	Three red indicators ON

Service Life of the Battery Pack

If any condition described below is observed, the battery pack is at the end of its service life. Replace it with a new one.

- Although the battery pack has been properly charged (fully charged), a great drop in tying time has been noticed.

NOTICE

Do not charge the battery pack when this happens. If the motor's rotational speed slows down, the power of the battery pack is considered to be nearly depleted. Using the tool more will cause it to overdischarge, resulting in a shortened service life of the battery pack and also in functional trouble of the tool's main body.

NOTICE

Do not use a battery pack when its service life is finished. This will cause functional trouble in the tool's main body. Also charging a battery pack that is out of service life will lead to functional trouble in the battery charger.

Recycling a Li-ion Battery

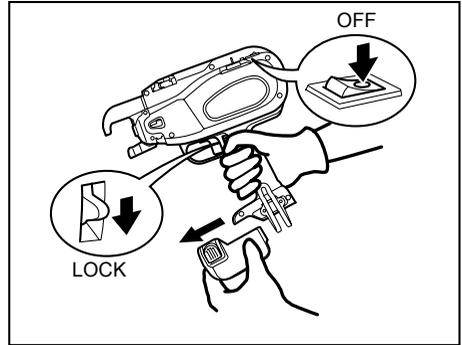
The MAX battery pack uses a Li-ion battery, it may be illegal to dispose of this battery into the municipal waste system. Check with your local solid waste officials for details in your area for recycling options or proper disposal.



CAUTION

When disposing of the battery pack, make sure to put a pack cap on its terminal (with insulating tape securing it) to prevent short circuits.

5. OPERATING INSTRUCTIONS

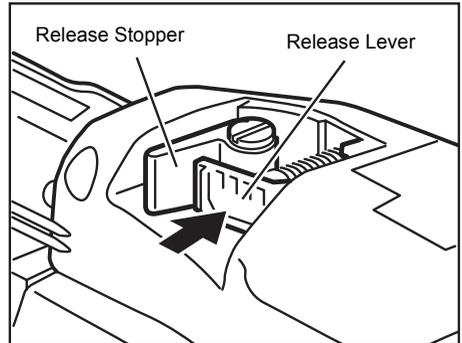


1. How to set the Tie-Wire

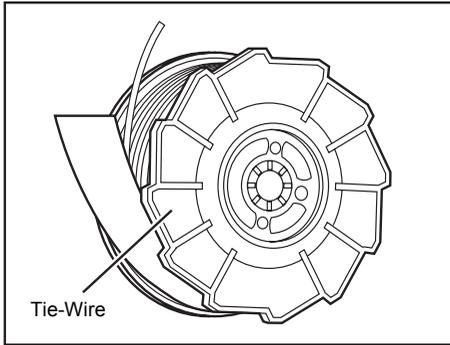


WARNING

- Be sure to set the Main switch to off, to lock the Trigger, and detach the Battery pack.



- ① Press the Release Lever of this equipment, and confirm that the Release Lever is caught in the Release Stopper.

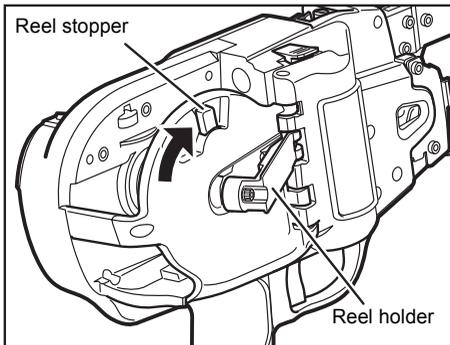


- ② Peel off the tape fixing Tie-Wire by about 2" (5cm). Stretch out the tip of the wound Tie-Wire.

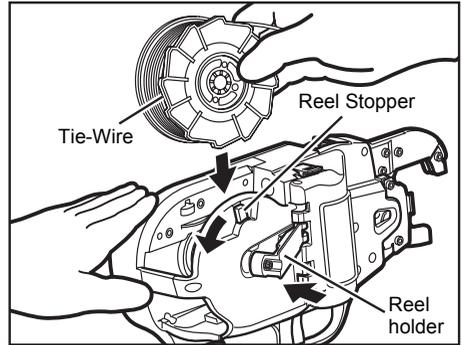
BE SURE TO USE ONLY THE SPECIFIED TIE-WIRE (MAX TW898).

The use of binding wire that has not been specified may cause breakdown of this equipment. Therefore, be sure only to use the specified MAX TW898. Do not use binding wire that has become rusted, since the use of rusted wire will cause equipment breakdown.

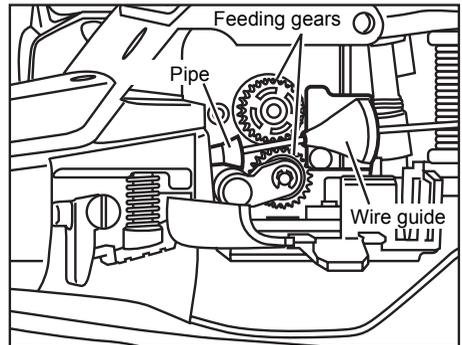
* TW897A, old wire reel cannot be used.



- ③ Push the reel stopper to release the reel holder.



- ④ Set the Tie-Wire in the tool by matching the side of the Tie-Wire as shown in the picture. Then slide the Reel stopper so that the Reel Holder can be pushed in the Reel. Then push the Reel Holder and fix it by sliding the Reel stopper.



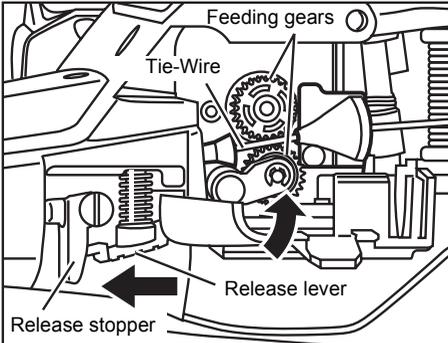
- ⑤ Insert the tip of the stretched out Tie-Wire into the Wire Guide. Then put it into the Pipe.

NOTICE

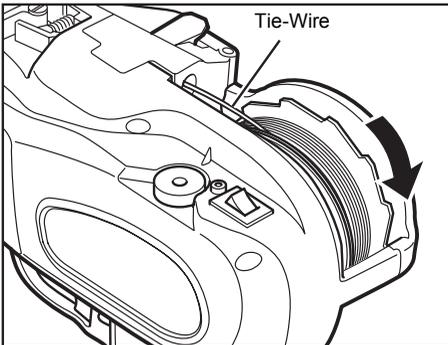
- Put the Wire around 4" (10cm) inside the Pipe.
 - The tip of the Tie-Wire should be straightened out to allow it to pass through the wire feeding mechanism.
- When mounting the Tie-Wire, the wire may become jammed inside the machine if the wire tip is bent.**

If the window is dirty and the pipe position can not be confirmed

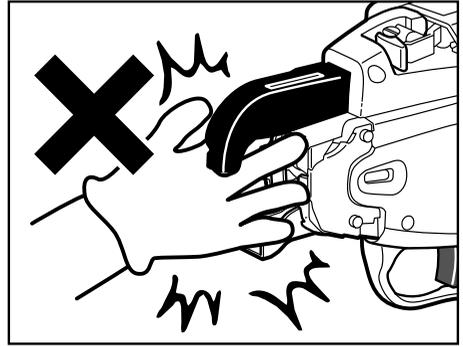
Open the window and wipe off the dirt on the inside of the window with a soft cloth, etc. Close the window again after cleaning to ensure that foreign objects will not be able to enter the machine.



- ⑥ Release the release stopper, and confirm that the release lever has returned to its original position and that the feeding gears are clamping the Tie-Wire. This completes the Tie-Wire mounting operation.



- ⑦ Remove the tape from the tie-wire completely.
⑧ Remove slack from wire spool. Make sure the Tie-Wire does not get caught behind the wire spool. This could lead to jamming.

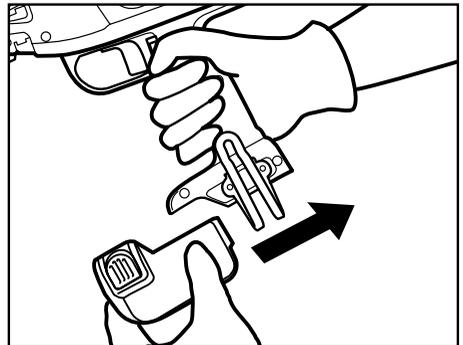


WARNING

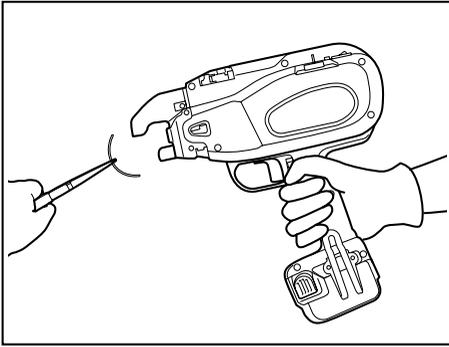
- When setting the main switch to ON, **absolutely do not bring your fingers close to the binding part and rotating part of the tool's tip.**
- **Do not touch the Tie-Wire during the tying work (while the machine is operating).**

NOTICE

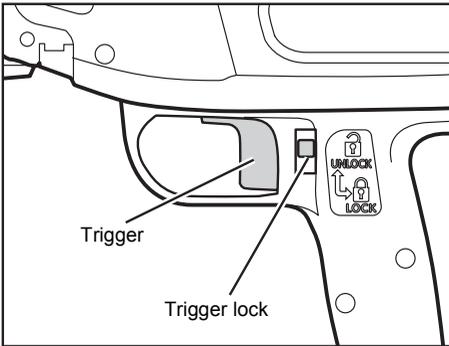
- **Do not switch the main switch ON and OFF in rapid succession, since this operation will cause machine breakdowns.**



- ⑨ Mount the battery pack on the tool's main body until a click is heard. Turn the Main Switch ON.

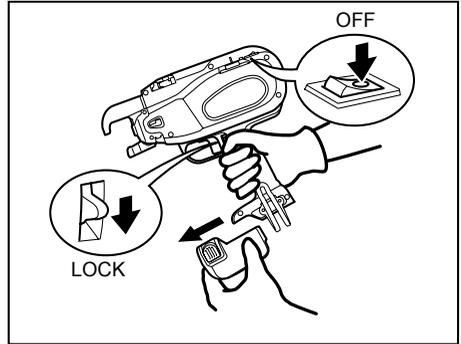


⑩ Tool feeds the wire about 6" (150 mm) and cuts the wire automatically. Remove the cut end of the wire with pliers.



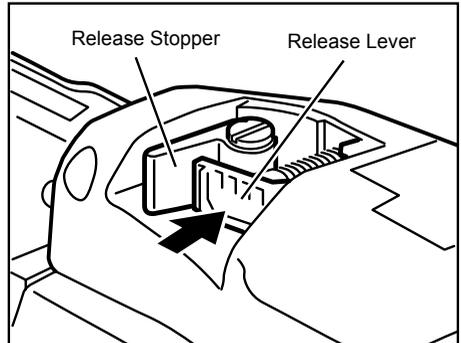
⑪ Unlock the Trigger before using the tool.

2. How to remove the Tie-Wire

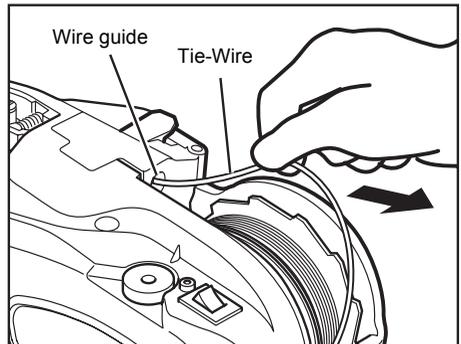


WARNING

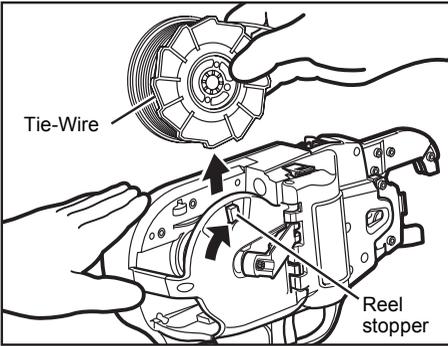
- Be sure to turn the Main switch **OFF**, **lock the Trigger**, and remove the Battery pack.



① Press the release lever, and confirm that the release lever is caught in the release stopper.



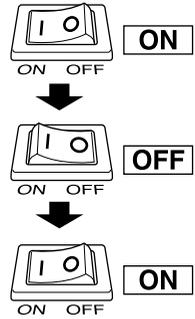
② Remove the Tie-Wire from the wire guide.



- ③ Slide the Reel stopper to release the Reel holder and remove the Tie-Wire.
- ④ Mount the new Tie-Wire. (Refer to the Tie-Wire mounting method explanation.)

When the Tie-Wire runs out of binding wire
 There should be around 12" (300 mm) of the Tie-Wire left at end of the spool. This should be discharged with the old spool and be replaced with a new one.

3. Auto Power-off feature



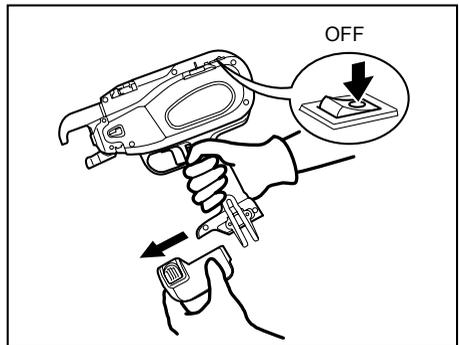
This Re-bar Tier have "Auto Power-off" feature, which saves the power consumption of the Li-ion battery when the tool is not operated.

If the tool is not operated for 30 minutes, the tool is automatically turned off. This is "Auto Power-off".

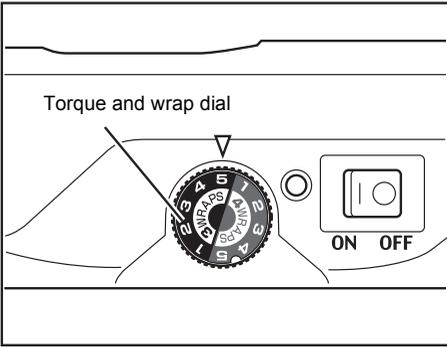
When the power is turned off automatically, turn the main switch OFF, then turn ON the switch again to operate the tool.

4. Tension and wrap adjustment

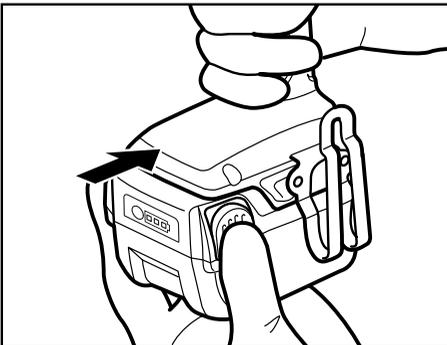
RB518



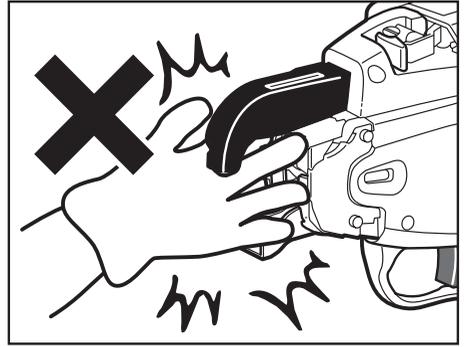
- ① Be sure to turn the Main switch OFF, to lock the Trigger and detach the Battery pack.



- ② This dial allows you to set 3 wraps / tie or 4 wraps / tie and also you can adjust the torque.
 To increase the tension, turn it in the counterclockwise.
 To decrease the tension, turn it in the clockwise.



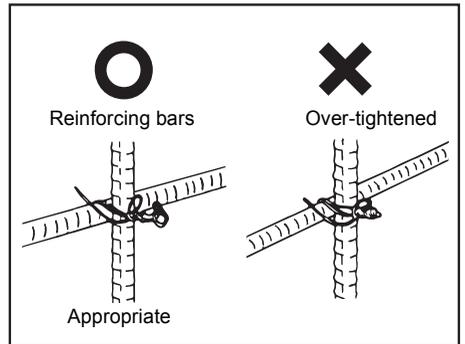
- ③ Insert the charged battery pack into the tool until a click is heard.



WARNING

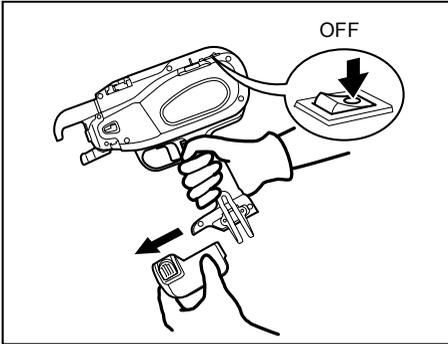
- **When setting the main switch to ON, absolutely do not bring your hand close to the binding part or rotating part of the tip of the tool.**

- ④ Set the Trigger Lock to UNLOCK and turn on the main switch.

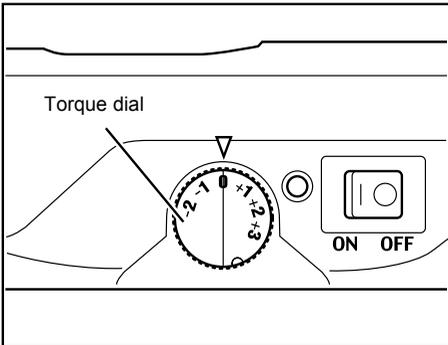


- ⑤ Test the tool again to check the tie strength.
 ⑥ If the tie strength is not appropriate, repeat procedures ①~⑤.

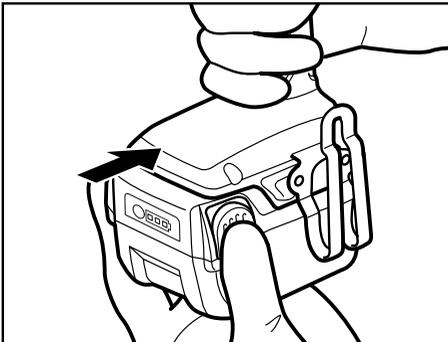
4. Tension adjustment RB398



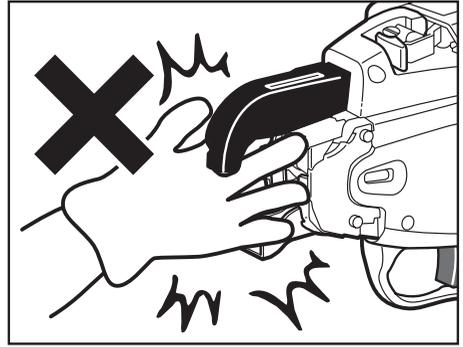
- ① Be sure to turn the Main switch OFF, to lock the Trigger and detach the Battery pack.



- ② This dial allows you to adjust wire tension torque slightly.
To increase the tension, turn it in the counterclockwise.
To decrease the tension, turn it in the clockwise.



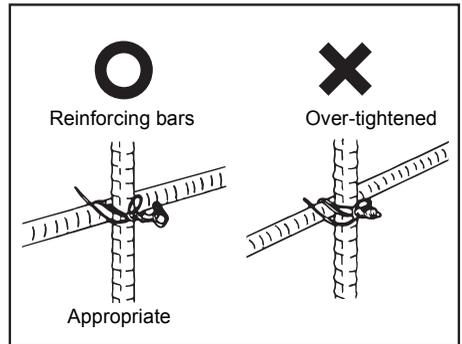
- ③ Insert the charged battery pack into the tool until a click is heard.



WARNING

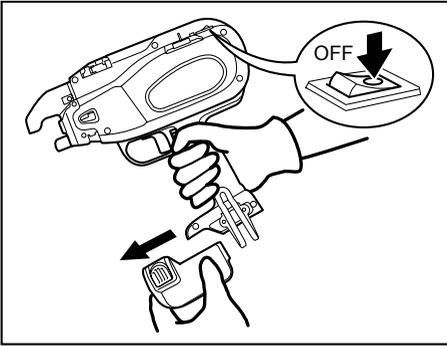
- When setting the main switch to ON, **absolutely do not bring your hand close to the binding part or rotating part of the tip of the tool.**

- ④ Set the Trigger Lock to UNLOCK and turn on the main switch.

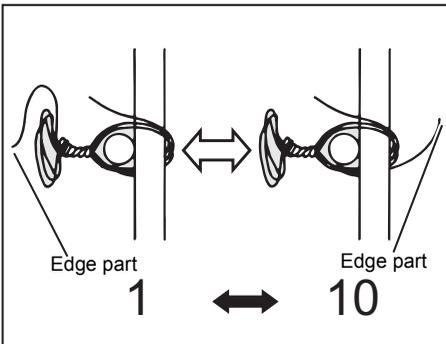
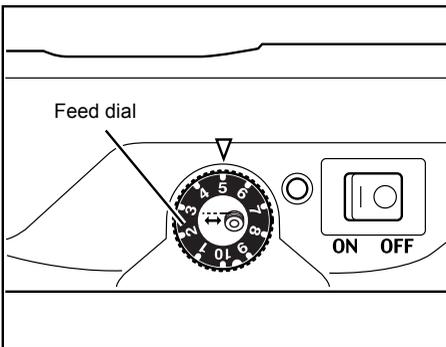


- ⑤ Test the tool again to check the tie strength.
⑥ If the tie strength is not appropriate, repeat procedures ①~⑤.

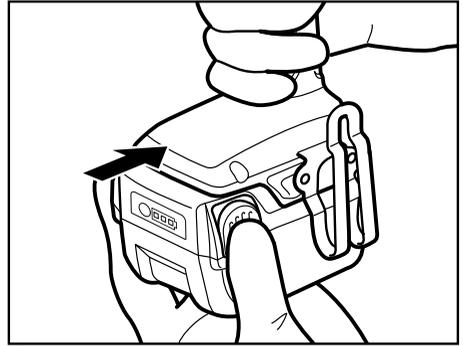
4. Wire length adjustment RB218



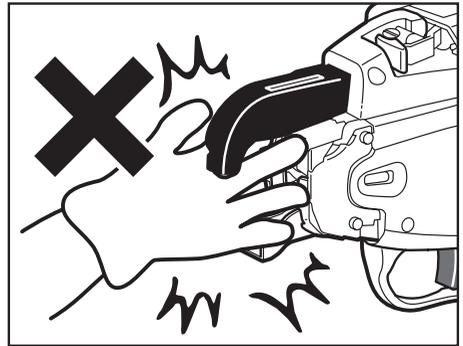
- ① Be sure to turn the main switch OFF, to lock the trigger and detach the battery pack.



- ② The feed dial is a mechanism to adjust feed rate of the Tie-Wire. When the edge part length is not appropriate after binding, use this dial to adjust it.



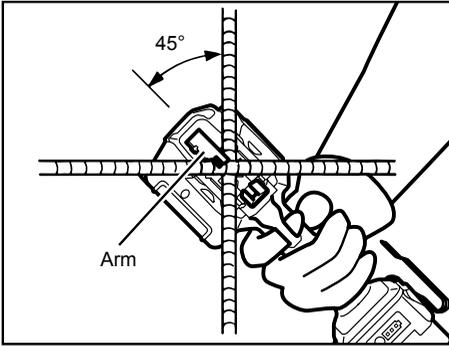
- ③ Mount the battery pack on the tool's main body insert the charged battery pack on to the main unit until a click is heard.



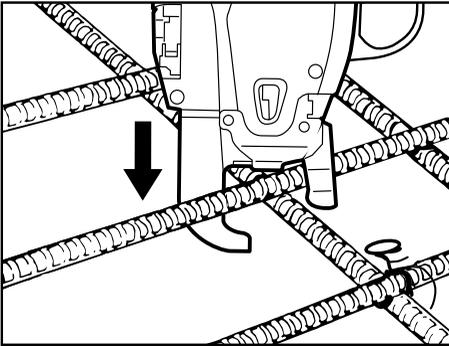
WARNING

- **When setting the main switch to ON, absolutely do not bring your hand close to the binding part or rotating part of the tip of the tool.**
- ④ Set the Trigger Lock to UNLOCK and turn on the main switch.
- ⑤ Test the tool again to check the tie strength.

5. For proper tightness



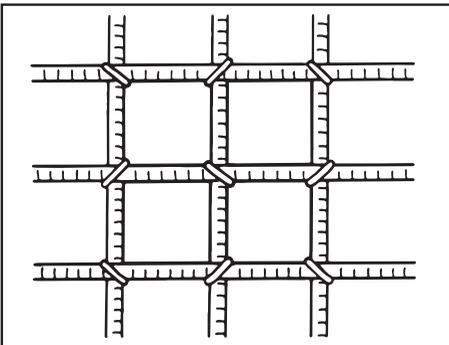
- ① Tilt the tool 45° angle to the crossed re-bars.



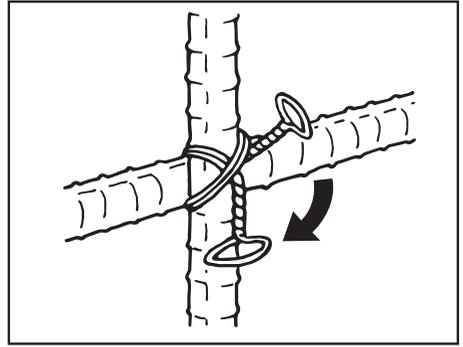
- ② Apply the tool perpendicularly to the surface of the crossed re-bars.

During tool operation

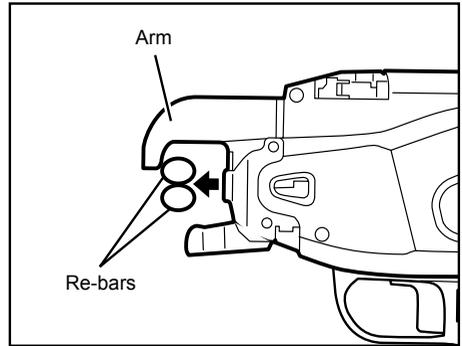
- Do not move the tool during tying operation until the tool stops tying automatically.



- ③ Tie in alternate direction.



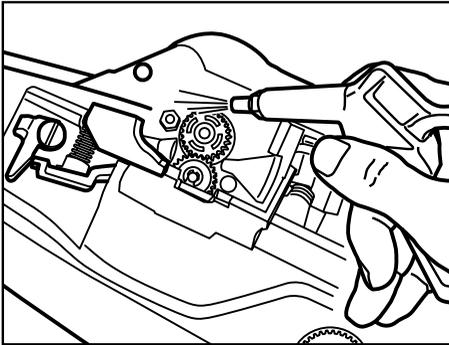
- ④ Cross tie.
Bent the tail of the first tie before making the second tie.



- ⑤ When you need extra tightness, place re-bars at the top of the Arm part.

6. MAINTENANCE

- ① Regularly inspect the tool
In order to maintain the performance of the tool, periodically clean up and inspect the tool.
- ② Do not lubricate the equipment
Absolutely do not lubricate this equipment. Applying lubrication will remove the grease inside of the tool, and cause problem on the tool.

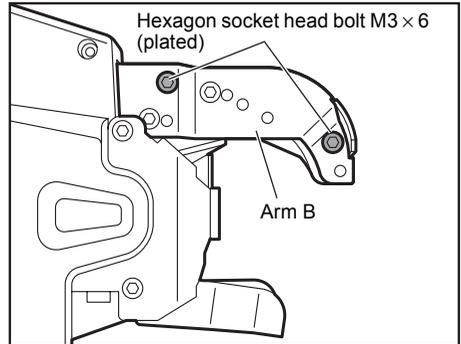


- ③ Regularly clean the feeding mechanism
In order to maintain the performance of the tool, periodically clean up the mechanism around the feed gear. Using the Air Duster or like, blow the dust and the iron sand off around the feed gear.

7. CLEANING MANUAL

When the machine operates for long hours, dust and wire cuttings may adhere to the cutter section. In such a case, disassemble and clean the machine according to the following procedure. (If a wire is caught in the cutter section or wire guide A, the wire can be removed according to the same procedure.)

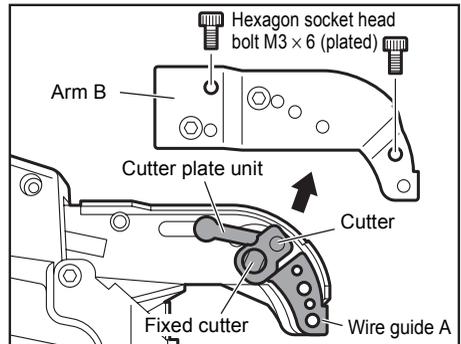
Disassembling **RB398**



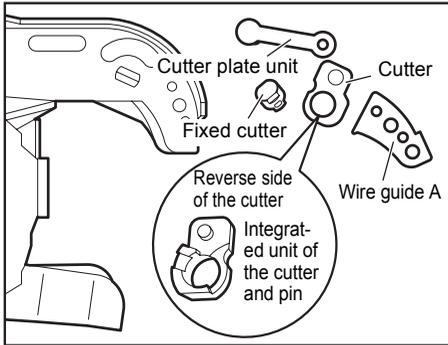
NOTICE

- Do not remove the 2 uncoated bolts.

1. Loosen the 2 (plated) hexagon socket head bolts M3 x 6.

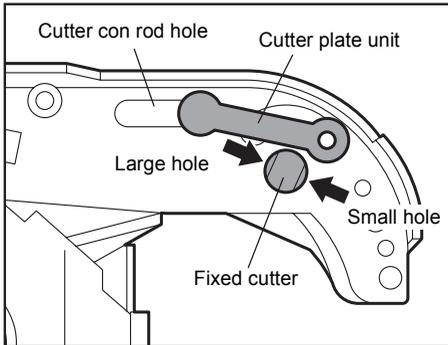


2. Remove arm B and the 2 (plated) hexagon socket head bolts M3 x 6.



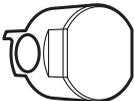
3. Remove the cutter and the fixed cutter, and clean them. (The removable parts are the cutter, fixed cutter, wire guide A and cutter plate unit.)

Assembling

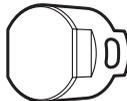


NOTICE

- Assemble the fixed cutter so that the large hole is set to the rear side and the small hole (long hole) is set to the top side.

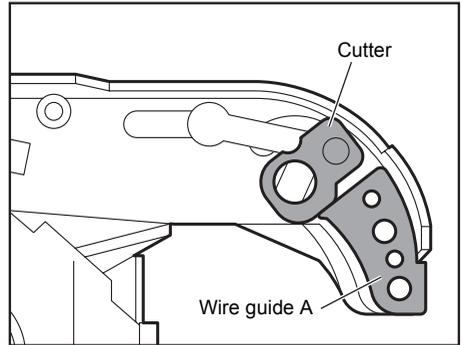


Rear side

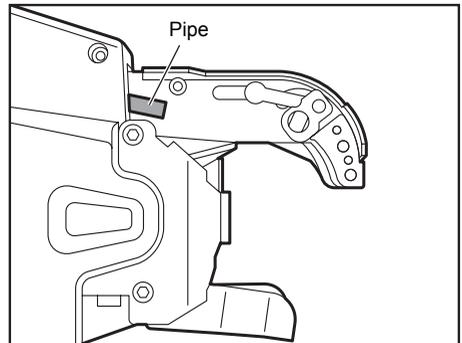
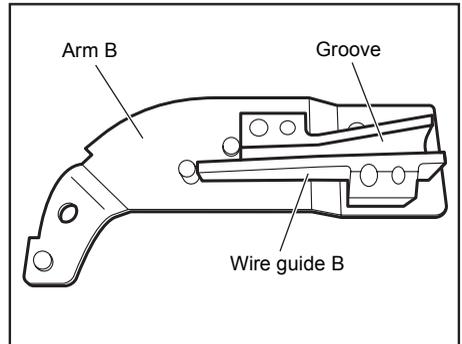


Top side

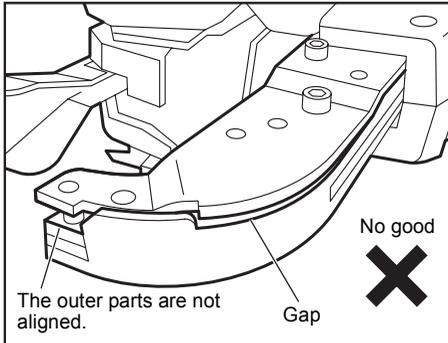
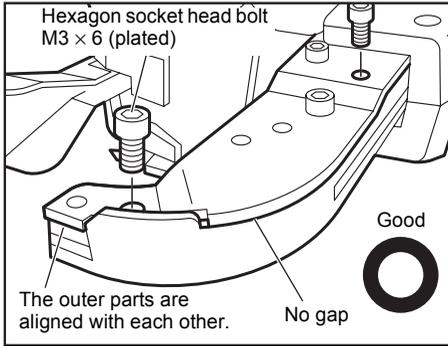
4. Put the pin of the cutter plate unit through the cutter con rod hole and assemble the fixed cutter to the unit.



5. Fit the cutter and assemble wire guide A.



6. Align the groove of wire guide B attached to arm B with the pipe, and assemble arm B.

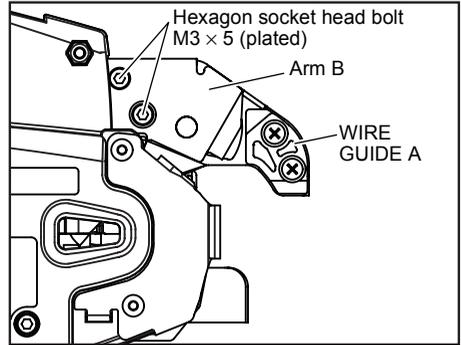


7. Make sure that arm B is securely assembled and tighten the 2 (plated) hexagon socket head bolts M3 × 6. (Tightening torque: 15.2lbF-inch (172cN-m))

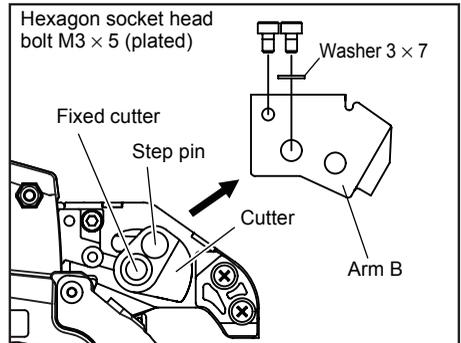
NOTICE

- Are there any loosening parts?
Make sure that the outer parts are aligned and the parts are securely assembled without any gap between them.

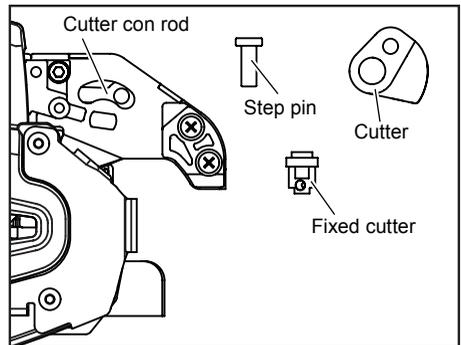
Disassembling **RB518** **RB218**



1. Loosen the 2 (plated) hexagon socket head bolts M3 × 5.

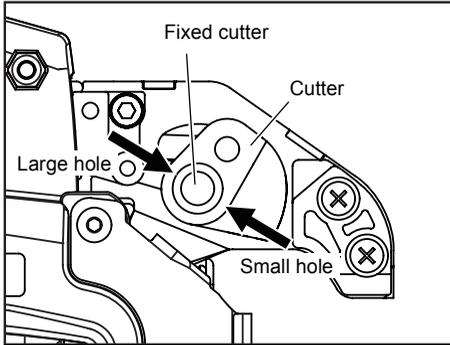


2. Remove arm B and the 2 (plated) hexagon socket head bolts M3 × 5.



3. Remove the cutter and the fixed cutter, and clean them. (The removable parts are the cutter, fixed cutter and step pin.)

Assembling



NOTICE

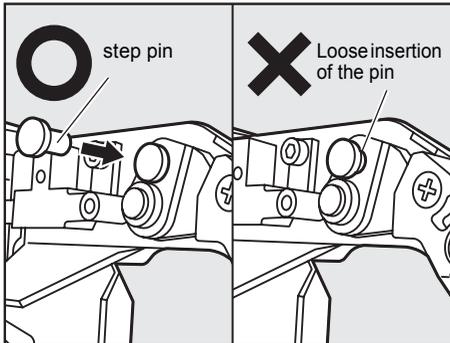
- Assemble the fixed cutter so that the large hole is set to the rear side and the small hole is set to the top side.



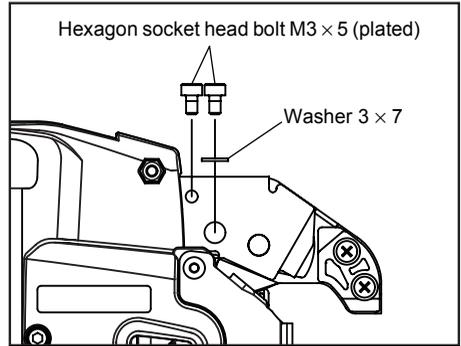
Rear side



Top side



4. Insert the step pin into the hole and then into the connecting rod hole.



5. Make sure that arm B is securely assembled and tighten the 2 (plated) hexagon socket head bolts M3 × 5. (Tightening torque: 15.2lbF-inch (172cN·m))

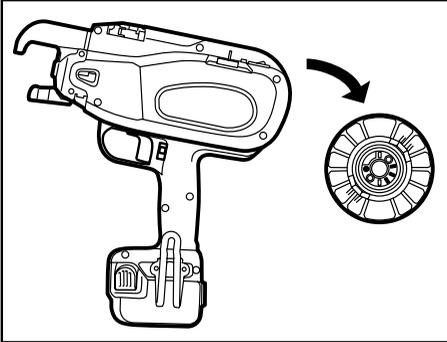
NOTICE

- The (right) bolt should have the captive washer. Install the washer first and then tighten the bolt.

8. STORAGE

Do not store the tool in a cold weather environment. Keep the tool in a warm area.

When not in use, the tool should be stored in a warm and dry place. Keep out of reach of children. All quality tools will eventually require servicing or replacement of parts because of wear from normal use.



REMOVE REEL OF TIE-WIRE

When you have finished the Tie-Wire, remove the Tie-Wire from the tool.

STORE THE TOOL

When you have finished tying work or when the tool will not be used for a while, switch off the tool, make sure the motor has stopped, lock the trigger, and remove the battery pack. Tool, attachments and accessories should be stored in a well-ventilated dry place where the temperature will not exceed 104°F (40°C).

The battery pack, with a pack cap installed on the pack's terminal to prevent short circuits, should be stored in a well-ventilated dry place where the temperature will not exceed 86°F (30°C).

9. TROUBLE SHOOTING/REPAIRS

The troubleshooting and/or repairs shall be carried out only by the MAX CO., LTD. authorized distributors or by other specialists.

This tool alerts you to the following conditions by means of a warning sound and warning lamp. The warning lamp is illuminated or blinks, and is interlocked with the warning sound. Take a countermeasure according to the following table.



WARNING

- If any of the following conditions occur, be sure to set the Main switch to OFF before carrying out the countermeasures.
- When setting the Main switch to ON, do not touch the tying part of rotating part of the tool's tip. If the problem is not solved by carrying out the following countermeasures, be sure to set the Main switch to OFF and then contact the dealer where the equipment was purchased or MAX CO., LTD. authorized distributors.

No.	Normal Operation	Problem	Warning Sound	Cause	What to Check	Solution
1.	Power ON → The Tip Axis is initialized and the wire-cutter operates automatically.	No operation takes place.	No sound emitted.	Dead battery (Completely empty)	Confirm the battery is charged.	Perform normal charge. (SEE PAGE 14)
				Electrode plate has been oxidized.	Taking out the battery, see if electrode has been browned.	Polish terminal part of battery pack with dry cloth, etc.
			A long beep (Piii...)	Curl guide is left open.	Open/close curl guide	Fully close curl guide.
			Continuous short beeps (Pi, pi, pi, ...)	Binding wire has been entangled around Twist section.	Turn off power and take out battery to confirm if binding wire has been entangled inside curl guide.	Turning off power, remove binding wire inside curl guide.
			Two short beeps repeated for 10 seconds (Pipi, Pipi, ...), then power off automatically	Battery is empty.	Confirm the battery is charged.	Perform normal charge. (SEE PAGE 14)
		The battery pack is inserted when the Main switch is ON.	Make sure to insert the battery pack, only when the Main switch is OFF.	Set the Main switch to OFF, then ON.		
2.	Power On → LED lamp is lit. → No operation over 30 minutes → LED lamp goes off. → Although pulling the trigger, no operation takes place.	No operation takes place, although pulling the trigger	A short beep (Pi), (before LED lamp goes off)	Normal operation. (SEE PAGE 22)	Set the Main switch to OFF, then ON.	Set the Main switch to OFF, then ON.
3.	Trigger ON → Wire sent out.	No sending of wire takes place.	A long beep (Piii...)	Curl guide is left open.	Open/close curl guide	Fully close curl guide.
			Three short beeps repeated (Pipipi, pipipi, ...)	Tie-Wire has been run out.	Check if the Tie-Wire has been run out or not.	Set the new Tie-Wire.
				Wire caught inside reel.	Check if wire inside reel has been loosened and caught.	Remove fray on reel.
				Cutter section is blocked with foreign substance.	Confirm functioning of Cutter section.	Either wipe Cutter section with dry cloth or blow it with air.
				A wire is caught in the cutter section or wire guide A.	Check if any wire is caught.	Disassemble the cutter section and remove the caught wire. (SEE PAGE 27)
	Five short beeps (Pipipipipi, pipipipipi)	Motor has been heated.	Warning sound does not go continuously. It occurs only when trigger is pulled.	Halt Machine and cool it down.		

No.	Normal Operation	Problem	Warning Sound	Cause	What to Check	Solution
3.	Trigger ON → Wire sent out.	Sending of wire is stopped halfway.	Four short beeps repeated (Pipipipi, pipipipi, ...)	Tie-Wire is not set in the tool. Binding wire not of designated types has been used.	Check if the Tie-Wire has been set in the tool. Confirm reel side face.	Set the Tie-Wire. Use MAX Tie-Wire TW898.
			Three short beeps repeated (Pipipi, pipipi, ...)	Binding wire has been entangled inside reel.	Confirm reel winding	Remove fray on reel.
4.	Binding wire draws a circle.	Curl is disordered and steps out of curl guide.	No sound emitted.	Wire, by hitting Reinforcing bars, was repelled.	Check if wire hits Reinforcing bars at binding.	Pay attention so that wire does not hit Reinforcing bars at binding.
5.	Wire is subject to cutting.	No wire cutting takes place.	No sound emitted.	Cutter section is blocked with foreign substance.	Confirm function of Cutter section.	Either wipe Cutter section with dry cloth or blow it with air.
6.	Wire twisting takes place.	Wire gets entangled.	No sound emitted.	Wire, by hitting Reinforcing bars, was repelled.	Check if wire hits Reinforcing bars at binding.	Pay attention so that wire does not hit Reinforcing bars at binding. (SEE PAGE 26)
			A short beep and a long beep, repeatedly. (Pipipipipi...)	Binding wire has been entangled around Twist section.	Turn off power and take out battery to confirm if binding wire has been entangled inside curl guide.	Turning off power, remove binding wire inside curl guide.
		Binding power is weak.	No sound emitted.	Reinforcing bars is not of designated size.	Confirm size of Reinforcing bars to be bound. (SEE PAGE 13)	Use appropriate diameter scope.
			Erroneous handling such as improper application of Machine.	Confirm how to apply Machine to Reinforcing bars.	Turning Torque dial in + and inserting in vertical direction, use as tilting at 45°. (SEE PAGE 23 AND 26)	
				Function of curl guide switch	Check if curl guide is left open at binding.	Do not operate Machine until binding is completed.
		Twisting-off takes place.	No sound emitted.	Reinforcing bars is not of designated size.	Confirm size of Reinforcing bars at binding. (SEE PAGE 13)	Use appropriate diameter scope.
				Erroneous handling such as improper application of Machine.	Confirm how to apply Machine to Reinforcing bars.	Turning Torque dial in - (minus) and inserting in vertical direction, use as tilting at 45°. (SEE PAGE 23 AND 26)
		Works properly	Two short beeps. (Pipi)	Low power remains in the Battery pack.	Confirm the battery is fully charged.	Perform normal charge after the tying speed slows down considerably.
The tool is used at low temperature.	Check the temperature at the job site.			Leave the tool and the battery pack at normal temperature in the room for some time, and then continue the operation.		

- The content of this manual might be changed without notice for improvement.



ATTENTION:

The product you have purchased is powered by a Li-ion battery which is recyclable. At the end of its useful life, under various state and local laws, it is illegal to dispose of this battery into your municipal waste stream. Please call 1-800-8-BATTERY for information on how to recycle this battery.

MAX

MAX CO., LTD.

MAX USA CORP.

257 East 2nd Street
Mineola, NY 11501, U.S.A.
TEL: 1-800-223-4293
FAX: (516)741-3272

www.maxusacorp.com (USA Site)

wis.max-ltd.co.jp/int/ (GLOBAL Site)



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