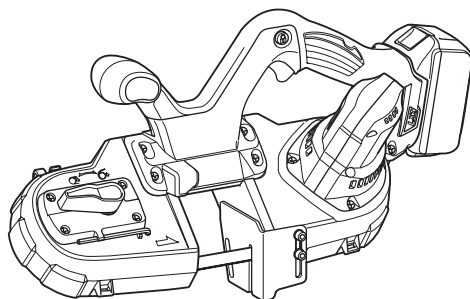


INSTRUCTION MANUAL



Cordless Portable Band Saw

DPB181



Read before use.

SPECIFICATIONS

Model		DPB181
Max. cutting capacity	Round workpiece	64 mm dia.
	Rectangular workpiece	64 mm x 64 mm
Blade speed		3.2 m/s
Blade size	Length	835 mm
	Width	13 mm
	Thickness	0.5 mm
Overall dimensions (L x W x H)		468 mm x 197 mm x 233 mm
Net weight		3.2 kg
Rated voltage		D.C. 18 V

- Due to our continuing program of research and development, the specifications herein are subject to change without notice.
- Specifications and battery cartridge may differ from country to country.
- Weight, with battery cartridge, according to EPTA-Procedure 01/2003

Symbols

The following show the symbols used for the equipment. Be sure that you understand their meaning before use.



Read instruction manual.



Only for EU countries
Do not dispose of electric equipment or battery pack together with household waste material!

In observance of the European Directives, on Waste Electric and Electronic Equipment and Batteries and Accumulators and Waste Batteries and Accumulators and their implementation in accordance with national laws, electric equipment and batteries and battery pack(s) that have reached the end of their life must be collected separately and returned to an environmentally compatible recycling facility.

Intended use

The tool is intended for cutting in plastic and ferrous materials.

Noise

The typical A-weighted noise level determined according to EN60745:

Sound pressure level (L_{pA}): 78 dB (A)

Uncertainty (K): 3 dB (A)

The noise level under working may exceed 80 dB (A).

Wear ear protection

Vibration

The vibration total value (tri-axial vector sum) determined according to EN60745:

Work mode : cutting metal

Vibration emission ($a_{h,CM}$): 2.5 m/s² or less

Uncertainty (K): 1.5 m/s²

NOTE: The declared vibration emission value has been measured in accordance with the standard test method and may be used for comparing one tool with another.

NOTE: The declared vibration emission value may also be used in a preliminary assessment of exposure.

⚠ WARNING: The vibration emission during actual use of the power tool can differ from the declared emission value depending on the ways in which the tool is used.

⚠ WARNING: Be sure 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).

EC Declaration of Conformity

For European countries only

The EC declaration of conformity is included as Annex A to this instruction manual.

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.

Work area safety

1. **Keep work area clean and well lit.** Cluttered or dark areas invite accidents.
2. **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.
3. **Keep children and bystanders away while operating a power tool.** Distractions can cause you to lose control.

Electrical safety

4. **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.
5. **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.
6. **Do not expose power tools to rain or wet conditions.** Water entering a power tool will increase the risk of electric shock.
7. **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 or moving parts.** Damaged or entangled cords increase the risk of electric shock.
8. **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.
9. **If operating a power tool in a damp location is unavoidable, use a ground fault circuit interrupter (GFCI) protected supply.** Use of an GFCI reduces the risk of electric shock.

Personal safety

10. **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.
11. **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.
12. **Prevent unintentional starting. Ensure the switch is in the off-position before connecting to power source and/or battery pack, picking up or carrying the tool.** Carrying power tools with your finger on the switch or energising power tools that have the switch on invites accidents.
13. **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.
14. **Do not overreach. Keep proper footing and balance at all times.** This enables better control of the power tool in unexpected situations.
15. **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.
16. **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.

Power tool use and care

17. **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.

18. **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.
19. **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.
20. **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.
21. **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.
22. **Keep cutting tools sharp and clean.** Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.
23. **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.

Battery tool use and care

24. **Recharge only with the charger specified by the manufacturer.** A charger that is suitable for one type of battery pack may create a risk of fire when used with another battery pack.
25. **Use power tools only with specifically designated battery packs.** Use of any other battery packs may create a risk of injury and fire.
26. **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.
27. **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.

Service

28. **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.
29. **Follow instruction for lubricating and changing accessories.**
30. **Keep handles dry, clean and free from oil and grease.**

CORDLESS PORTABLE BAND SAW SAFETY WARNINGS

1. Hold power tool by insulated gripping surfaces, when performing an operation where the cutting accessory may contact hidden wiring. Cutting accessories contacting a "live" wire may make exposed metal parts of the power tool "live" and could give the operator an electric shock.
2. Use only blades which are listed in "SPECIFICATIONS".
3. Check the blade carefully for cracks or damage before operation. Replace cracked or damaged blade immediately.
4. Secure the workpiece firmly. When cutting a bundle of workpieces, be sure that all workpieces are secured together firmly before cutting.
5. Cutting workpieces covered with oil can cause the blade to come off unexpectedly. Wipe off all excess oil from workpieces before cutting.
6. Never use the cutting oil as a cutting lubricant. Use only Makita cutting wax.
7. Do not wear gloves during operation.
8. Hold the tool firmly with both hands.
9. Keep hands away from rotating parts.
10. When cutting metal, be cautious of hot flying chips.
11. Do not leave the tool running unattended.
12. Do not touch the blade or the workpiece immediately after operation; they may be extremely hot and could burn your skin.

SAVE THESE INSTRUCTIONS.

⚠WARNING: DO NOT let comfort or familiarity with product (gained from repeated use) replace strict adherence to safety rules for the subject product. **MISUSE** or failure to follow the safety rules stated in this instruction manual may cause serious personal injury.

IMPORTANT SAFETY INSTRUCTIONS

FOR BATTERY CARTRIDGE

1. Before using battery cartridge, read all instructions and cautionary markings on (1) battery charger, (2) battery, and (3) product using battery.
2. Do not disassemble battery cartridge.
3. If operating time has become excessively shorter, stop operating immediately. It may result in a risk of overheating, possible burns and even an explosion.
4. If electrolyte gets into your eyes, rinse them out with clear water and seek medical attention right away. It may result in loss of your eyesight.

5. Do not short the battery cartridge:
 - (1) Do not touch the terminals with any conductive material.
 - (2) Avoid storing battery cartridge in a container with other metal objects such as nails, coins, etc.
 - (3) Do not expose battery cartridge to water or rain.

A battery short can cause a large current flow, overheating, possible burns and even a breakdown.

6. Do not store the tool and battery cartridge in locations where the temperature may reach or exceed 50°C (122°F).
7. Do not incinerate the battery cartridge even if it is severely damaged or is completely worn out. The battery cartridge can explode in a fire.
8. Be careful not to drop or strike battery.
9. Do not use a damaged battery.
10. The contained lithium-ion batteries are subject to the Dangerous Goods Legislation requirements.

For commercial transports e.g. by third parties, forwarding agents, special requirement on packaging and labeling must be observed.
For preparation of the item being shipped, consulting an expert for hazardous material is required. Please also observe possibly more detailed national regulations.
Tape or mask off open contacts and pack up the battery in such a manner that it cannot move around in the packaging.
11. Follow your local regulations relating to disposal of battery.

SAVE THESE INSTRUCTIONS.

⚠CAUTION: Only use genuine Makita batteries. Use of non-genuine Makita batteries, or batteries that have been altered, may result in the battery bursting causing fires, personal injury and damage. It will also void the Makita warranty for the Makita tool and charger.

Tips for maintaining maximum battery life

1. Charge the battery cartridge before completely discharged.

Always stop tool operation and charge the battery cartridge when you notice less tool power.
2. Never recharge a fully charged battery cartridge.

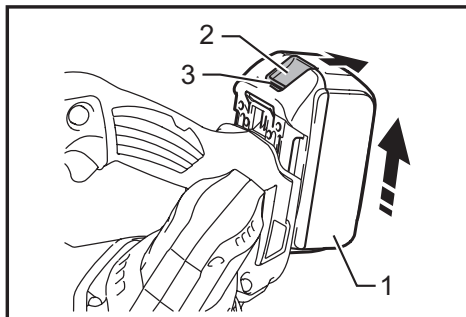
Overcharging shortens the battery service life.
3. Charge the battery cartridge with room temperature at 10°C - 40°C (50°F - 104°F). Let a hot battery cartridge cool down before charging it.
4. Charge the battery cartridge if you do not use it for a long period (more than six months).

FUNCTIONAL DESCRIPTION

⚠ CAUTION:

- Always be sure that the tool is switched off and the battery cartridge is removed before adjusting or checking function on the tool.

Installing or removing battery cartridge



► 1. Battery cartridge 2. Button 3. Red indicator

⚠ CAUTION:

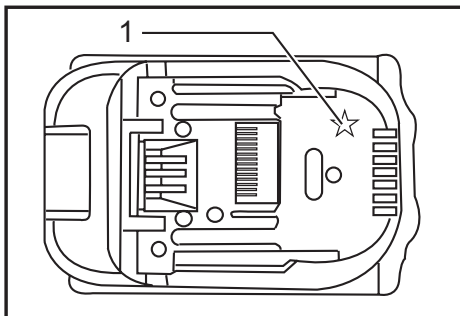
- Always switch off the tool before installing or removing of the battery cartridge.
- **Hold the tool and the battery cartridge firmly when installing or removing battery cartridge.** Failure to hold the tool and the battery cartridge firmly may cause them to slip off your hands and result in damage to the tool and battery cartridge and a personal injury.

To remove the battery cartridge, slide it from the tool while sliding the button on the front of the cartridge. To install the battery cartridge, align the tongue on the battery cartridge with the groove in the housing and slip it into place. Insert it all the way until it locks in place with a little click. If you can see the red indicator on the upper side of the button, it is not locked completely.

⚠ CAUTION:

- Always install the battery cartridge fully until the red indicator cannot be seen. If not, it may accidentally fall out of the tool, causing injury to you or someone around you.
- Do not install the battery cartridge forcibly. If the cartridge does not slide in easily, it is not being inserted correctly.

Battery protection system (Lithium-ion battery with star marking)



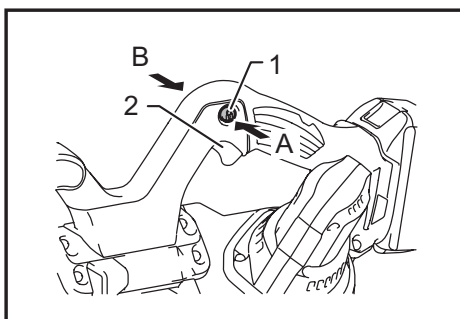
► 1. Star marking

Lithium-ion batteries with a star marking are equipped with a protection system. This system automatically cuts off power to the tool to extend battery life.

The tool will automatically stop during operation if the tool and/or battery are placed under one of the following conditions:

- **Overloaded:**
The tool is operated in a manner that causes it to draw an abnormally high current. In this situation, release the switch trigger on the tool and stop the application that caused the tool to become overloaded. Then pull the switch trigger again to restart. If the tool does not start, the battery is overheated. In this situation, let the battery cool before pulling the switch trigger again.
- **Low battery voltage:**
The remaining battery capacity is too low and the tool will not operate. In this situation, remove and recharge the battery.

Switch action



► 1. Trigger-lock button 2. Switch trigger

⚠ CAUTION:

- Before installing the battery cartridge into the tool, always check to see that the switch trigger actuates properly and returns to the "OFF" position when released.

To prevent the switch trigger from accidentally pulled, the trigger-lock button is provided.

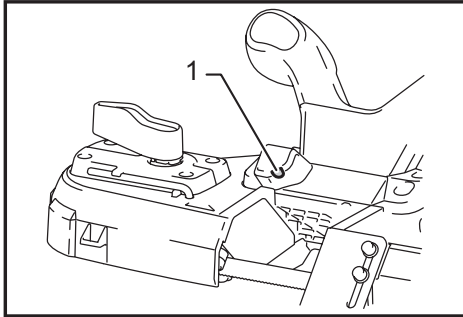
To start the tool, press the trigger-lock button from B side and pull the switch trigger.

Release the switch trigger to stop. After use, always press in the trigger-lock button from A side.

Lighting up the lamp

⚠ CAUTION:

- Do not look in the light or see the source of light directly.



► 1. Lamp

Pull the switch trigger to light up the lamp. The lamp keeps on lighting while the switch trigger is being pulled. The lamp goes out just after releasing the trigger.

NOTICE:

- Do not apply impact to the lamp, which may cause damage or shorten service time to it.
- Use a dry cloth to wipe the dirt off the lens of lamp. Be careful not to scratch the lens of lamp, or it may lower the illumination.
- Do not use thinner or gasoline to clean the lamp. Such solvents may damage it.

ASSEMBLY

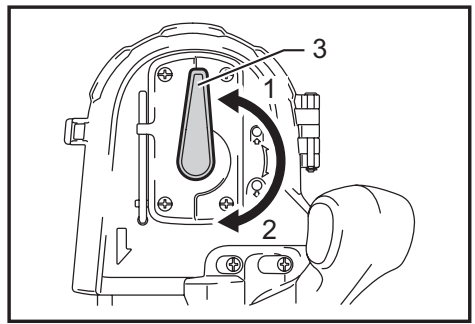
⚠ CAUTION:

- Always be sure that the tool is switched off and the battery cartridge is removed before carrying out any work on the tool.

Installing or removing the blade

⚠ CAUTION:

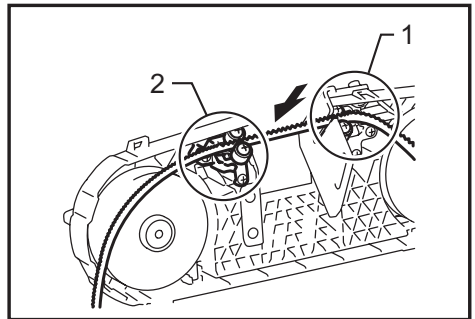
- Oil on the blade can cause the blade to slip or come off unexpectedly. Wipe off all excess oil with a cloth before installing the blade.
- Always wear protective gloves when handling the blade.
- Use caution when handling the blade to avoid cut by the sharp edge of the blade teeth.
- Keep your body away from the blade area when checking the blade movement.
- When turning the blade tightening lever clockwise to release the tension on the blade, point the tool downward because the blade may come off unexpectedly.



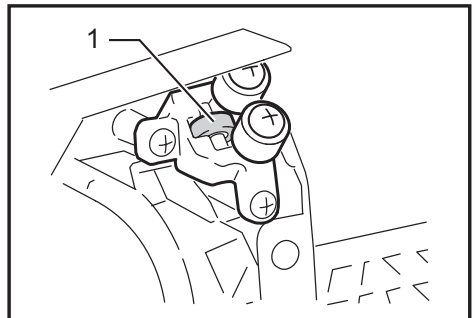
► 1. Tighten 2. Loosen 3. Lever

To install the blade:

1. Turn the blade tightening lever clockwise until it stops to loosen the wheel.
2. Match the direction of the arrows on the blade and on the wheels.

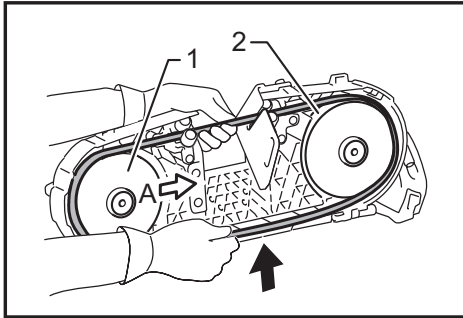


► 1. Lower holder 2. Upper holder



► 1. Bottom bearing

3. Insert the non-serrated side of the blade into the upper holder and lower holder. Make sure the blade in both upper and lower holder touches to the bottom bearings.



► 1. Wheel 2. Rubber tire

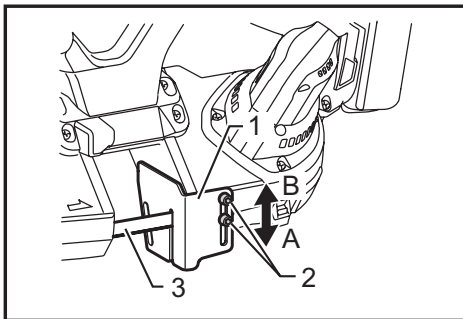
4. With pressing the middle part of the blade, position the blade around one wheel. Moving the wheel to A side makes it easier to do so.
5. Position the blade on another wheel similarly.
6. Position the edge of the blade on rubber tire.
7. Hold the blade in place and turn the blade-tightening lever counterclockwise until it stops. This places proper tension on the blade.

Make sure that the blade is correctly positioned around the wheels.

Start and stop the tool two or three times to make sure that the blade runs properly on the wheels.

To remove the blade, follow the installation procedure in reverse.

Adjusting the stopper plate position



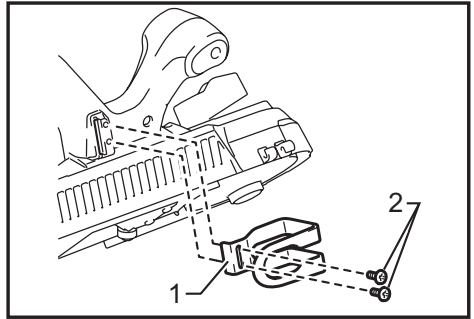
► 1. Stopper plate 2. Screws 3. Blade

In the ordinary operation, protrude the stopper plate to the A side fully.

When the stopper plate strikes against the obstacles like a wall or the like at the finishing of a cut, loosen two screws and slide it to the B side in the figure.

After sliding the stopper plate, secure it by tightening two screws firmly.

Hook (Optional accessory)



► 1. Hook 2. Screws

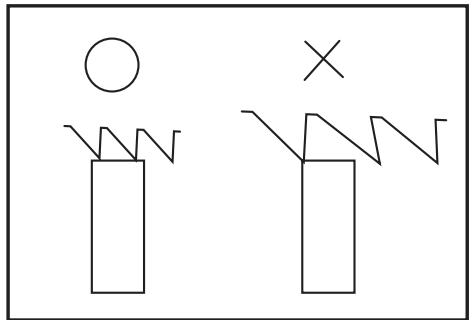
Hook is useful for hanging the tool. Hang tool on a pipe vice or other suitable, stable structure.

To install the hook, set the hook alongside the groove and tighten it with two screws.

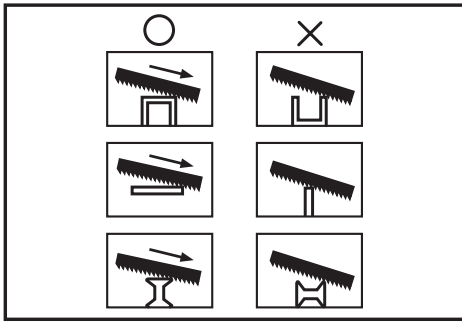
OPERATION

⚠ CAUTION:

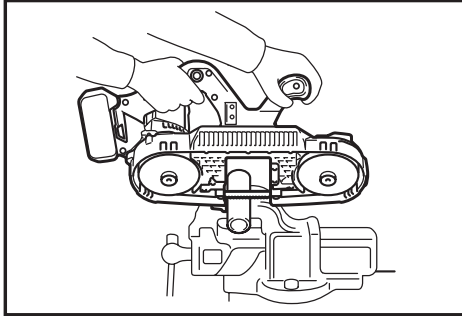
- Always hold front and rear handle. Never hold the tool body or guards. Hands may slip from these locations and contact blade. Contact with the blade may result in personal injury.
- Make sure to hold the tool firmly when turning on or off the tool or when cutting. Otherwise the tool may fall and cause personal injury.



For stable cut, always keep at least two teeth in the cut.



Select the proper cutting position for your workpiece by referring to the figure.



Hold the tool with both hands as shown in the figure. Before turning on the tool, always make sure that the stopper plate contacts the workpiece and the blade is clear of the workpiece.

Turn the tool on and wait until the blade attains full speed. Gently lower the blade into the cut. The weight of the tool or slightly pressing the tool will supply adequate pressure for the cutting. Do not force the tool. As you reach the end of a cut, release pressure and lift it slightly so that it will not fall against the workpiece.

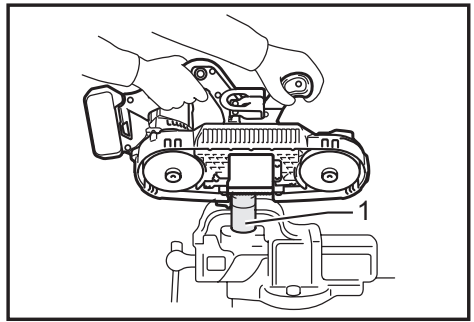
NOTICE:

- Applying excessive pressure to the tool or twisting of the blade may cause bevel cutting or damage to the blade.
- When not using the tool for a long period of time, remove the blade from the tool.
- If the tool is operated continuously until the battery cartridge has discharged, allow the tool to rest for 15 minutes before proceeding with a fresh battery.

Cutting lubricant

CAUTION:

- Never use cutting oil or apply excessive amount of wax to the blade. It may cause the blade to slip or come off unexpectedly.
- When cutting cast iron, do not use any cutting wax.



► 1. Cutting wax

When cutting metals, use Makita cutting wax as a cutting lubricant. To apply the cutting wax to the blade teeth, remove a cap of the cutting wax, start the tool and cut into the cutting wax as shown in the figure.

MAINTENANCE

CAUTION:

- Always be sure that the tool is switched off and the battery cartridge is removed before attempting to perform inspection or maintenance.

Cleaning

CAUTION:

- Never use gasoline, benzine, thinner, alcohol or the like. Discoloration, deformation or cracks may result.
- Wax and chips on the tires may cause the blade to slip and come off unexpectedly. Use a dry cloth to remove wax and chips from the tires.

After use, remove wax, chips and dust from the tool, wheel tires and blade.

Replacing tires on wheels

Replace the tires when the blade slips or does not track properly because of badly worn tires.

To maintain product SAFETY and RELIABILITY, repairs, any other maintenance or adjustment should be performed by Makita Authorized Service Centers, always using Makita replacement parts.

OPTIONAL ACCESSORIES

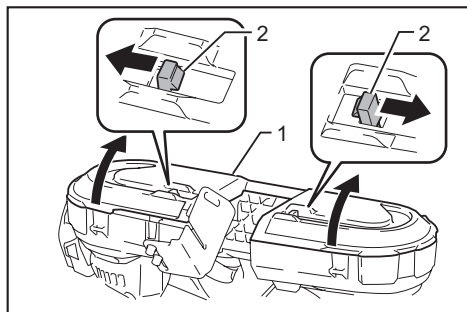
⚠ CAUTION:

- These accessories or attachments are recommended for use with your Makita tool specified in this manual. The use of any other accessories or attachments might present a risk of injury to persons. Only use accessory or attachment for its stated purpose.

If you need any assistance for more details regarding these accessories, ask your local Makita Service Center.

- Makita genuine battery and charger
- Band saw blades
- Hex wrench 4
- Cutting wax
- Hook
- Wheel cover

NOTICE: When opening the wheel cover, open and release both the hooks simultaneously. Opening only one hook may cause crack on the wheel cover.



- 1. Wheel cover 2. Hook

NOTE:

- Some items in the list may be included in the tool package as standard accessories. They may differ from country to country.

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