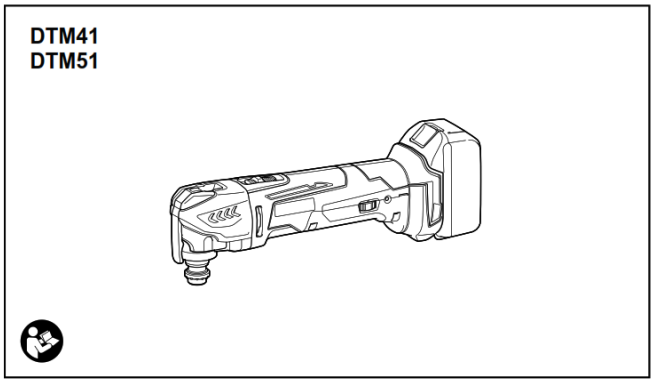
makita DTM Series Cordless Multi Tool Instruction Manual

Cordless Multi-Tool
INSTRUCTION MANUAL



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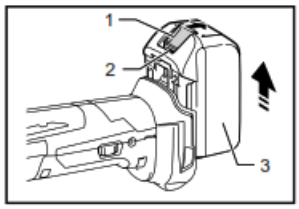
DTM Series Cordless Multi Tool



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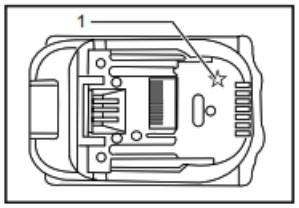

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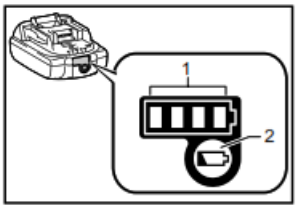

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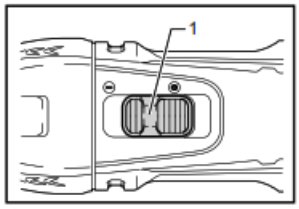

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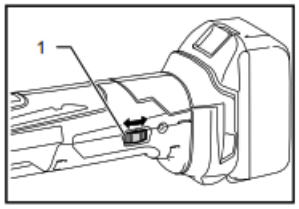

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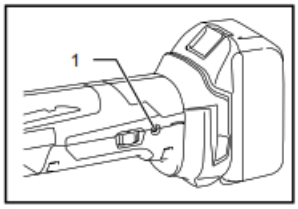

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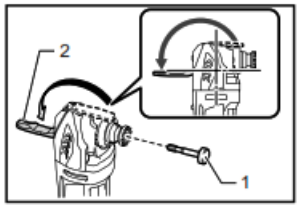

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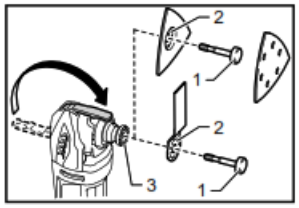

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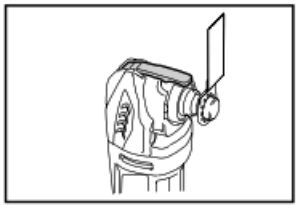
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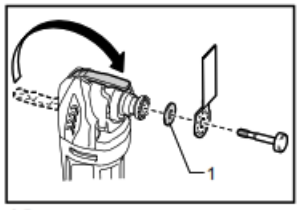

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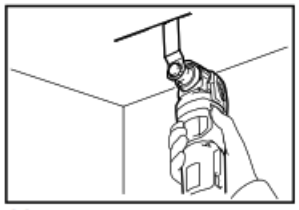
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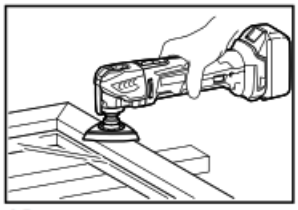
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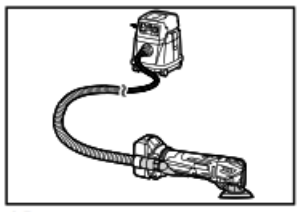
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(Original instructions)
Explanation of general view

1-1. Button	3-2. Check button	7-2. Lock lever
1-2. Red indicator	4-1. Slide switch	8-1. Holder bolt
1-3. Battery cartridge	5-1. Dial	8-2. Holes in the application tool
2-1. Star marking	6-1. Indication lamp	8-3. Protrusions of the tool flange
3-1. Indicator lamps	7-1. Holder bolt	10-1. Adapter

SPECIFICATIONS

Model		**DTM41**		**DTM51**	
Oscillation per minute		6,000 – 20,000 (min-1)			
Oscillation angle, left/right		1.6 ° (3.2 ° total)			
Standard battery cartridge		BL1430 / BL1440 / BL1450	BL1415*/ BL1415N *	BL1830 I BL1840IBL1840B I BL18501BLI850B	BL1815 * / BL1815N*/ BL1820 * / BL1820B *
Overall length		340 mm	326 mm	340 mm	326 mm
Net weight	without dust extraction attachment	2.1 kg	2.0 kg	2.2 kg	2.0 kg
	with dust extraction attachment	2.2 kg	2.1 kg	2.3 kg	2.1 kg
Rated voltage		D.C. 14.4 V		D.C. 18 V	

- **NOTE:** For continuous operation, high-capacity battery cartridges, BL1430, BL1440, BL1450, BL1830, BL1840, BL1840B, BL1850 and BL1850B are recommended.
- Due to our continuing program of research and development, the specifications herein are subject to change without notice.
- Specifications and battery cartridges may differ from country to country.
- Weight, with battery cartridge, according to EPTA-Procedure 01/2003

Intended use
The tool is intended for sawing and cutting wood, plastic, gypsum, non-ferrous metals, and fastening elements (e. g. unhardened nails and staples). It is also intended for working soft wall tiles, as well as dry sanding and scraping of small surfaces. It is especially for working close to edge and flush cutting.

Noise
The typical A-weighted noise level determined according to EN60745:
Work mode: Sanding
Model DTM41
Sound pressure level (LpA) : 76 dB (A)
Uncertainty (K) : 3 dB (A)
The noise level under working may exceed 80 dB (A).
Model DTM51
Sound pressure level (LpA) : 77 dB (A)
Uncertainty (K) : 3 dB (A)
The noise level under working may exceed 80 dB (A).
Work mode: Cutting with plunge cut saw blade
Model DTM41
Sound pressure level (LpA) : 80 dB (A)
Sound power level (LWA) : 91 dB (A)
Uncertainty (K) : 3 dB (A)**Model DTM51**
Sound pressure level (LpA) : 81 dB (A)
Sound power level (LWA) : 92 dB (A)
Uncertainty (K) : 3 dB (A)
Work mode: Cutting with a segmental saw blade
Model DTM41
Sound pressure level (LpA) : 77 dB (A)
Uncertainty (K) : 3 dB (A)
The noise level under working may exceed 80 dB (A).

Model DTM51
Sound pressure level (LpA
Uncertainty (K) : 3 dB (A)
The noise level under work
Work mode: Scraping
Model DTM41
Sound pressure level (LpA
Uncertainty (K) : 3 dB (A)
The noise level under work
Model DTM51
Sound pressure level (LpA
Sound power level (LWA) :
Uncertainty (K) : 3 dB (A)
Wear ear protection
Vibration
The vibration total value (tr
determined according to E
Model DTM41
Work mode: sanding
Vibration emission (ah) : 3.
Uncertainty (K) : 1.5 m/s 2

Model DTM51
Work mode : sanding
Vibration emission (ah) : 3.0 m/s 2
Uncertainty (K) : 1.5 m/s 2
Model DTM41
Work mode : cutting with plunge cut saw blade
Vibration emission (ah) : 7.0 m/s 2
Uncertainty (K) : 1.5 m/s 2
Model DTM51
Work mode: cutting with plunge cut saw blade Vibration emission (ah) : 7.0 m/s 2
Uncertainty (K) : 1.5 m/s 2

Model DTM41
Work mode: cutting with a
Vibration emission (ah) : 4
Uncertainty (K) : 1.5 m/s 2
Model DTM51
Work mode: cutting with se
Uncertainty (K) : 1.5 m/s 2
Model DTM41
Work mode: scraping
Vibration emission (ah) : 5
Uncertainty (K) : 1.5 m/s 2
Model DTM51
Work mode: scraping
Vibration emission (ah) : 5
Uncertainty (K) : 1.5 m/s 2

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

⚠ **WARNING:**

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

For European countries only
EC Declaration of Conformity
Makita declares that the following Machine(s):
Designation of Machine: Cordless Multi-Tool
Model No./ Type: DTM41, DTM51
Conforms to the following European Directives: 2006/42/EC
They are manufactured in accordance with the following standard or standardized documents: EN60745
The technical file in accordance with 2006/42/EC is available from:
Makita, Jan-Baptist Vinkstraat 2, 3070, Belgium 18.7.2013

Yasushi Fukaya
Director
Makita, Jan-Baptist Vinkstraat 2, 3070, Belgium

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.

CORDLESS MULTI-TOOL SAFETY WARNINGS

1. This power tool is intended to function for sawing, cutting, grinding and sanding. Read all safety warnings, instructions, illustrations and specifications provided with this power tool. Failure to follow all instructions listed below may result in electric shock, fire and/or serious injury.
2. Hold the 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.
3. Use clamps or another practical way to secure and support the workpiece to a stable platform. Holding the work by hand or against your body leaves it unstable and may lead to loss of control.
4. Always use safety glasses or goggles. Ordinary eye or sunglasses are NOT safety glasses.
5. Avoid cutting nails. Inspect the workpiece for any nails and remove them before operation.
6. Hold the tool firmly.
7. Make sure the application tool is not contacting the workpiece before the switch is turned on.
8. Keep hands away from moving parts.
9. Do not leave the tool running. Operate the tool only when hand-held.
10. Always switch off and wait for the blade to come to a complete stop before removing the blade from the workpiece.
11. Do not touch the application tool or the workpiece immediately after operation; they may be extremely hot and could burn your skin.

12. Do not operate the tool at no-load unnecessarily.
13. Always use the correct dust mask/respirator for the material and application you are working with.
14. Some material contains chemicals that may be toxic. Take caution to prevent dust inhalation and skin contact. Follow material supplier safety data.
15. This tool has not been waterproofed, so do not use water on the workpiece surface.
16. Ventilate your work area adequately when you perform sanding operations.
17. Use of this tool to sand some products, paints and wood could expose user to dust containing hazardous substances. Use appropriate respiratory protection.
18. Be sure that there are no cracks or breakage on the pad before use. Cracks or breakage may cause personal injury.
19. Do not use accessories that are not specifically designed and recommended by the tool manufacturer. Just because the accessory can be attached to your power tool, it does not assure safe operation.
20. Wear personal protective equipment. Depending on the application, use face shield, safety goggles or safety glasses. As appropriate, wear hearing protectors, gloves and a workshop apron capable of stopping small abrasive or workpiece fragments. The eye protection must be capable of stopping flying debris generated by various operations. The dust mask or respirator must be capable of filtrating particles generated by your operation. Prolonged exposure to high-intensity noise may cause hearing loss.
21. Keep bystanders a safe distance away from work area. Anyone entering the work area must wear personal protective equipment.
    Fragments of workpieces or of a broken accessory may fly away and cause injury beyond the immediate area of operation.
22. Never lay the power tool down until the accessory has come to a complete stop. The spinning accessory may grab the surface and pull the power tool out of your control.
23. Do not run the power tool while carrying it at your side. Accidental contact with the accessory could snag your clothing, pulling the accessory into your body.
24. Do not operate the power tool near flammable materials. Sparks could ignite these materials.
25. Do not use accessories that require liquid coolants. Using water or other liquid coolants may result in electrocution or shock.
26. Always be sure that the tool is switched off and unplugged or that the battery cartridge is removed before carrying out any work on the tool.
27. Always be sure you have a firm footing. Be sure no one is below when using the tool in high locations.

SAVE THESE INSTRUCTIONS.

⚠ **WARNING:**

DO NOT let comfort or familiarity with the 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 the battery cartridge, read all instructions and cautionary markings on (1) the battery charger, (2) the battery, and (3) the product using the battery.
2. Do not disassemble the battery cartridge.

3. If the 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 cartridges in a container with other metal objects such as nails, coins, etc.
   (3) Do not expose the 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 the battery.
8. Do not use a damaged battery.
9. Follow your local regulations relating to the disposal of batteries.

SAVE THESE INSTRUCTIONS.
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

⚠ WARNING:

- Always be sure that the tool is switched off and the battery cartridge is removed before adjusting or checking the function on the tool.
  Failure to switch off and remove the battery cartridge may result in serious personal injury from accidental start-up.
  Installing or removing the battery cartridge Fig.1

⚠ 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 the 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:**

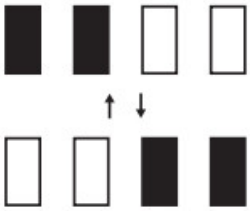
- Always install the battery cartridge fully until the red indicator cannot be seen. If not, it may accidentally fall out of the tool, causing injury to you or someone around you.
- Do not install the battery cartridge forcibly. If the cartridge does not slide in easily, it is not being inserted correctly.

Battery protection system
(Lithium-ion battery with star marking)
Fig.2
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, slide the slide switch on the tool toward the “O (OFF)” position and stop the application that caused the tool to become overloaded. Then slide the slide switch toward the “I (ON)” position again to restart.
  If the tool does not start, the battery is overheated. In this situation, let the battery cool before sliding the slide switch toward the “I (ON)” position 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.

Overheat protection

When the tool is overloaded and the tool temperature reaches a certain level, the tool automatically stops. In this situation, let the tool cool before turning on the tool again.
Indicating the remaining battery capacity
(Only for battery cartridges with “B” at the end of the model number.)
Fig.3
Press the check button on the battery cartridge to indicate the remaining battery capacity. The indicator lamps light up for few seconds.

Indicator lamps			Remaining capacity
Lighted	Off	Blinking	
			75% to 100%
			50% to 75%
			25% to 50%
			0% to 25%
			Charge the battery.
			The battery may have malfunctioned.

NOTE:

- Depending on the conditions of use and the ambient temperature, the indication may differ slightly from the actual capacity. Switch action

  Fig.4

  ⚠ **CAUTION:**
- Before installing the battery cartridge into the tool, always check to see that the tool is switched off. To start the tool, slide the slide switch toward the “I (ON)” position.

  To stop the tool, slide the slide switch toward the “O (OFF)” position.

Adjusting the orbital stroke rate
Fig.5
The orbital stroke rate is adjustable. To change the orbital stroke rate, turn the dial between 1 and 6. The higher the number is, the higher the orbital stroke rate is.
Preset the dial to the number suitable for your workpiece.

NOTE:

- The dial cannot be turned directly from 1 to 6 or from 6 to 1. Forcing the dial may damage the tool. When changing the dial direction, always turn the dial moving it through each intermediate number. Indication lamp

  Fig.6

- When the remaining battery capacity gets low, the indication lamp blinks.
- When the remaining battery capacity gets much lower, the tool stops during operation and the indication lamp lights up about 10 seconds.
  At this time, remove the battery cartridge from the tool and charge 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 application tool (optional accessory)
  WARNING:
- Do not install the application tool upside down. Installing the application tool upside down may damage the tool and cause serious personal injury.
- Install the attachment tool in the correct direction according to your work. Application tools can be installed at an angle of every 30 degrees.
  CAUTION:
- Be careful when closing the lock lever. The lock lever may close suddenly and pinch your finger.
- Clean up dust and perform lubrication on the moving part of the lock lever from time to time. Otherwise, dust may accumulate in the moving part of the lock lever and hinder its smooth movement.
- Do not start the tool while the lever opens.

The tool may be damaged.

1. Open the lock lever fully. And remove the holder bolt.
   Fig.7
2. Put an application tool (optional accessory) on the tool flange so that the protrusions of the tool flange fit in the holes in the application tool.
   Fig.8
3. Insert the holder bolt till it stops. And then, return the lock lever to its original position.
   Fig.9
   When using the sanding application tool, mount the application tool on the sanding pad so that it matches the sanding pad direction.
   The sanding pad has a hook and loop type fitting system which allows easy and rapid fitting of sanding paper. As sanding papers have holes for dust extraction, mount a sanding paper so that the holes in the sanding paper match those in the sanding pad.
   To remove a sanding paper, raise its end and peel it off. To remove the holder bolt, follow the installation procedures in reverse.

Fig.10
When using application tools with a different type of installation section, use the correct adapter (optional accessory).

OPERATION

⚠ **WARNING:**

- Before starting the tool and during operation, keep your hand and face away from the application tool.

  ⚠ **CAUTION:**
- Do not apply excessive load to the tool which may cause a motor lock and stop the tool. Cutting, sawing, and scraping

  ⚠ **CAUTION:**
- Do not move on the tool forcibly in the direction (eg. towards either side) of the tool application with no cutting edge. It may damage the tool.

  Fig.11

  Put the application tool on the workpiece.

  And then move the tool forward so that the application tool movement does not slow down.

  NOTE:
- Forcing or excessive pressure on the tool may reduce efficiency.
- Before cutting the operation, it is recommended to preset the orbital stroke rate 4 – 6.
- Remove sawdust by drawing the tool adequately.

  It increases work efficiency.
- The round saw is recommended for cutting a long straight line. Sanding

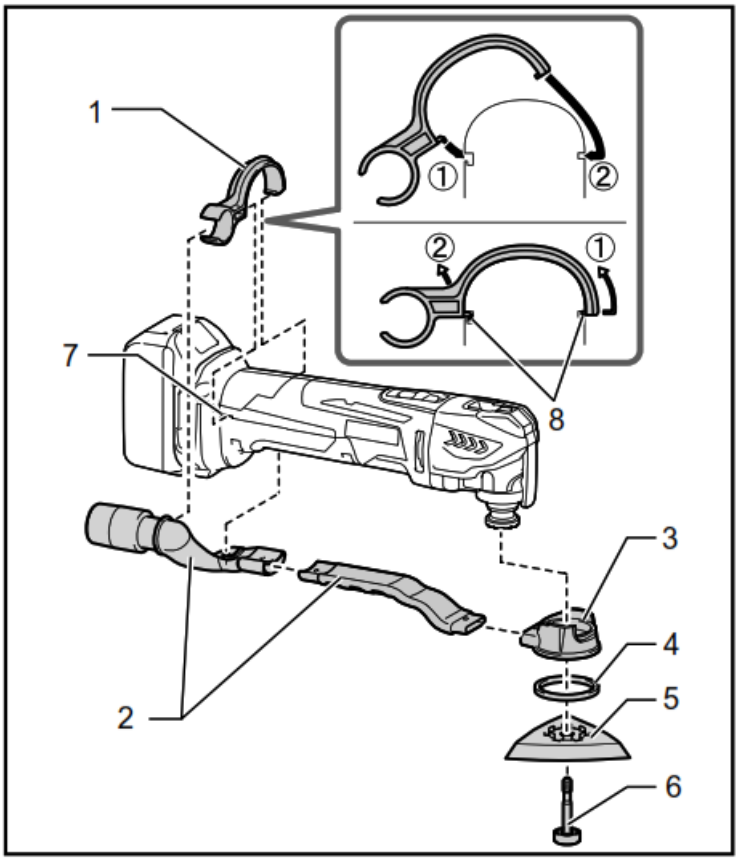
  ⚠ **CAUTION:**
- Do not reuse sanding paper used for sanding metal to sand wood.
- Do not use worn sanding paper or sanding paper without grit.

  Fig.12

  Apply sanding paper on the workpiece.

  NOTE:
- Using a test material sample to try is recommendable to determine a correct orbital stroke rate suitable for your work.
- Use sanding paper with the same grit until sanding the whole workpiece is completed.

  Replacing sanding paper with different grit sanding paper may not get a fine finish. Dust extraction attachment (optional accessory)



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- Install dust nozzles and dust attachments.
- Install the nozzle band on the tool so that its protrusions fit in the holes in the tool to secure it.
- Put the felt ring and the sanding pad on the dust attachment and then secure them with the application tool installation bolt.

  Fig.13

  When you wish to perform the cleaner operations, connect a vacuum cleaner to your tool. Connect a hose of a vacuum cleaner to the dust extraction attachment (optional accessory).

1. Nozzle band
2. Dust nozzle
3. Dust attachment
4. Felt ring
5. Pad
6. Holder bolt
7. Holes in the tool
8. Protrusions on the nozzle band

MAINTENANCE

⚠ CAUTION:

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

an inspection or maintenance.

- Never use gasoline, benzine, thinner, alcohol or the like. Discoloration, deformation or cracks may result.
  To maintain product SAFETY and RELIABILITY, repairs, carbon brush inspection and replacement, 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.

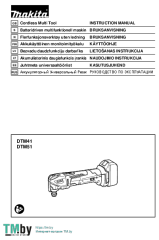
• Segment saw blade • Round saw blade • Plunge cut saw blade • Scraper (rigid) • Scraper (flexible) • Serrated seg blade • General joint cutter • HM remover • HM seg saw blade • HM sanding plate • Diamond seg sawblade	• Sanding pad • Adapter • Abrasive paper delta (red/white/bl • Fleece delta (medium / coarse / w • Polishing felt delta • Hex wrench • Dust extraction attachment • Makita genuine battery and charge

NOTE:

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

Makita Jan-Baptist Vinkstraat 2, 3070, Belgium
Makita Corporation Anjo, Aichi, Japan
www.makita.com
885329B988

Documents / Resources

	**makita DTM Series Cordless Multi Tool** [pdf] Instruction Manual DTM Series Cordless Multi Tool, DTM Series, DTM41, DTM51, Cordless Multi Tool, Multi Tool

References

- **MAKITA Industrial Power Tools - The Leader In Cordless with 18V LXT Lithium-Ion**