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Makita DGA517Z

Makita 18V LXT Brushless 5" Angle Grinder DGA517Z Instruction Manual

Model: DGA517Z

INTRODUCTION

This manual provides essential information for the safe and effective operation, setup, and maintenance of your Makita 18V LXT Brushless 5" Angle Grinder, model DGA517Z. This tool is designed for grinding, cutting, and sanding various materials. Please read this manual thoroughly before using the tool to ensure proper handling and to prevent injury or damage.



Figure 1: Makita 18V LXT Brushless 5" Angle Grinder DGA517Z. This image shows the complete tool with a battery attached and the side handle installed.

SAFETY INFORMATION

Always observe basic safety precautions to reduce the risk of fire, electric shock, and personal injury. Keep this instruction manual for future reference.

- **Work Area Safety:** Keep the work area clean and well-lit. Cluttered or dark areas invite accidents. Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases, or dust.
- **Electrical Safety:** Power tool plugs must match the outlet. Never modify the plug in any way. Avoid body contact with earthed or grounded surfaces.
- **Personal Safety:** Always wear eye protection, hearing protection, and appropriate respiratory protection. Use safety footwear and gloves when necessary. Stay alert, watch what you are doing, and use common sense when operating a power tool.
- **Tool Use and Care:** Do not force the power tool. Use the correct power tool for your application. Disconnect the battery pack from the power tool before making any adjustments, changing accessories, or storing power tools.
- **Battery Safety:** Use only genuine Makita batteries. Using non-genuine batteries can lead to fire, personal injury, or property damage, and voids the product warranty.

ONLY USE GENUINE MAKITA® LITHIUM-ION BATTERIES
USING NON-GENUINE MAKITA LITHIUM-ION BATTERIES VOIDS THE WARRANTY ON YOUR MAKITA TOOLS

NON-GENUINE MAKITA LITHIUM-ION BATTERIES MAY BURST CAUSING FIRES, PERSONAL INJURIES, OR PROPERTY DAMAGE

CAUTION MAKITA CANADA INC. NOTIFIES TOOL USERS OF THE HAZARDS AND RISKS OF USING NON-GENUINE MAKITA LITHIUM-ION BATTERIES.

USING NON-GENUINE MAKITA BATTERIES CREATES RISK OF:

- The battery bursting which may result in personal injury and/or property damage
- Possible fire damage to the tool, the battery, and/or the charger
- Poor tool performance

GENUINE PARTS & ACCESSORIES
GENUINE MAKITA 18V LITHIUM-ION BATTERIES HAVE MULTIPLE MAKITA® TRADEMARK LOGOS

"KNOCK-OFF" MAKITA 18V LITHIUM-ION BATTERIES HAVE NO MAKITA® TRADEMARK LOGOS

Figure 2: Warning regarding the use of non-genuine Makita Lithium-Ion batteries. Using unauthorized batteries can pose safety risks and void your warranty.

SETUP

1. Battery Installation and Removal

To install the battery, align the battery pack with the housing and slide it in until it locks into place. To remove, press the release button on the battery and slide it out.



Figure 3: Rear view of the grinder, illustrating the battery insertion point. Ensure the battery is fully seated and locked.

2. Attaching the Side Handle

The side handle can be screwed into either side of the gear housing for left or right-handed operation. Ensure it is tightened

securely before use.



Figure 4: Side view of the grinder with the auxiliary side handle attached. The handle provides additional control and stability during operation.

3. Adjusting the Wheel Guard

The tool features a toolless wheel cover (part number 123145-8) for quick adjustment. Loosen the clamp lever, rotate the guard to the desired position to protect against sparks and debris, and then tighten the lever firmly.

4. Installing Grinding/Cutting Wheels

To install a wheel, first ensure the tool is off and the battery is removed. Press the spindle lock button to prevent the spindle from rotating. Place the inner flange onto the spindle, then position the grinding or cutting wheel (e.g., 5" Depressed Centre Wheel D-20797) onto the inner flange. Secure it with the lock nut and tighten it firmly using the provided lock nut wrench (part number 782424-9).



Figure 5: Front view of the grinder, highlighting the installed grinding wheel and adjustable guard. Always ensure the wheel is correctly mounted and secured.

OPERATING INSTRUCTIONS

1. Powering On and Off (Paddle Switch)

This grinder is equipped with a two-stage safety paddle switch to prevent accidental start-up. To start the tool, first slide the lock-off lever forward, then depress the paddle switch. To stop, simply release the paddle switch.



Figure 6: Close-up of the paddle switch and lock-off lever. The lever must be engaged before the paddle switch can be depressed to start the tool.



Figure 7: A hand demonstrating the proper grip and activation of the paddle switch for operation.

2. Variable Speed Adjustment

The variable speed dial allows for RPM adjustment from 3,000 to 8,500. Rotate the dial to select the appropriate speed for your application. Lower speeds are suitable for polishing or delicate work, while higher speeds are for aggressive grinding or cutting.



Figure 8: Detail of the variable speed dial, allowing users to select RPM settings from 1 to 5.



Figure 9: A chart on the tool body correlating dial settings (1-5) with their respective RPM ranges, from 3,000 to 8,500 min^{-1} .

3. Active Feedback Sensing Technology (AFT) and Automatic Torque Drive Technology (ADT)

This tool incorporates advanced safety and performance features:

- **Active Feedback Sensing Technology (AFT):** Automatically shuts down the tool if there is a sudden drop in rotation speed, such as during a kick-back event, enhancing user safety.
- **Automatic Torque Drive Technology (ADT):** Adjusts speed and torque automatically during operation for optimal performance based on the load, ensuring efficient material removal.

4. Electric Brake

The integrated electric brake stops the grinding or cut-off wheel in 2 seconds or less after the paddle switch is released, contributing to increased productivity and safety.

5. Battery Charge Indicator

The tool features a battery charge indicator to monitor the remaining battery life. Refer to the indicator lights to determine when recharging is necessary.

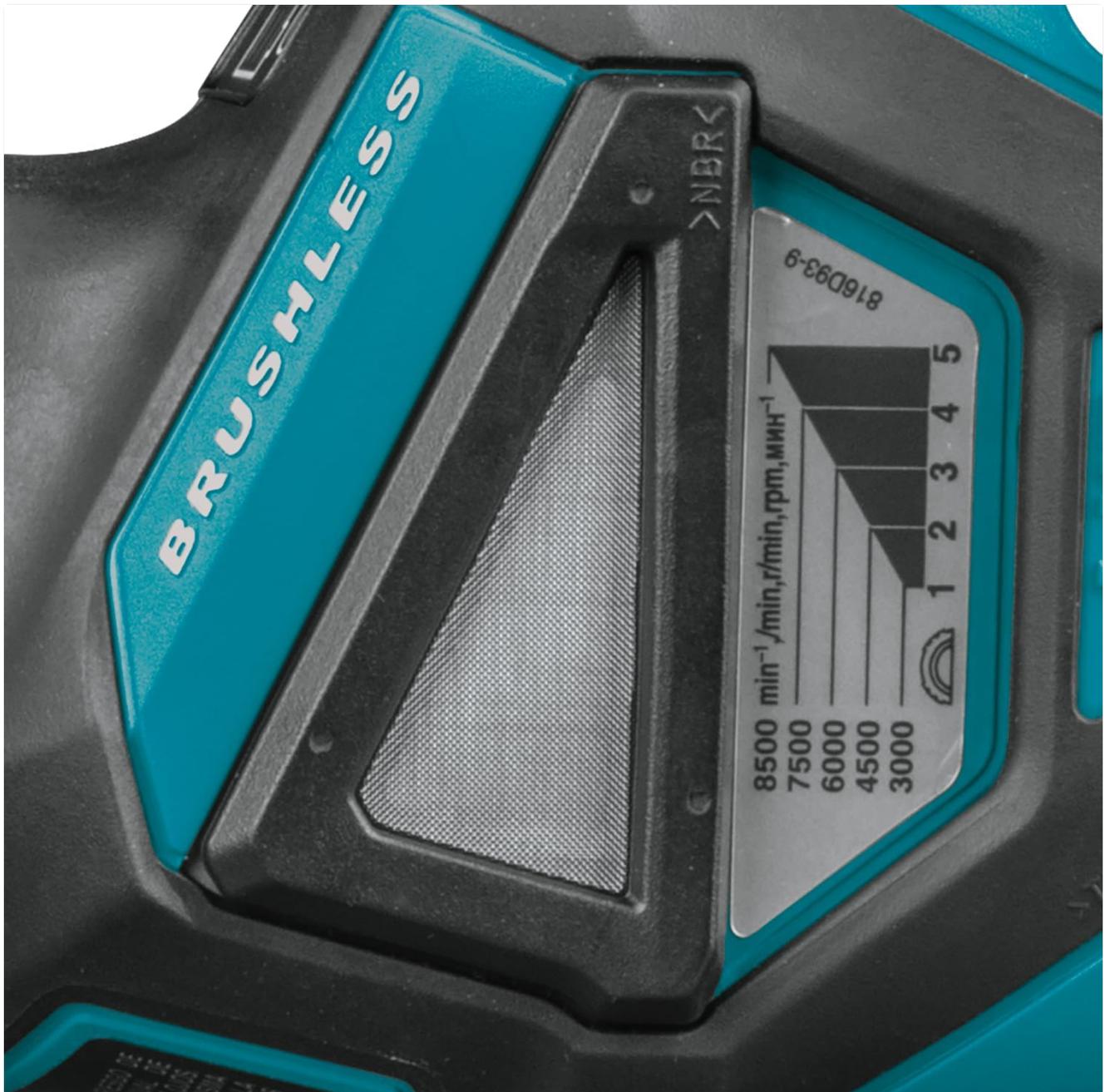


Figure 10: The battery charge indicator, showing three red bars and a green circle, indicating the battery's power level.

6. General Usage

Hold the tool firmly with both hands. Apply even pressure and allow the tool to do the work. Avoid excessive force, which can lead to kick-back or damage to the workpiece or tool. Always ensure proper ventilation and clear the work area of bystanders.



Figure 11: The angle grinder actively cutting a metal piece, generating sparks. Proper safety gear, including gloves and eye protection, is visible.



Figure 12: The angle grinder being used to cut a metal pipe, demonstrating its application in pipework. Sparks are visible during the cutting process.

MAINTENANCE

1. Cleaning

Regularly clean the tool's ventilation openings to prevent overheating. Use a soft cloth to wipe down the exterior. Do not use harsh chemicals or abrasive cleaners.

2. Brushless Motor

The brushless motor design eliminates the need for carbon brush replacement, reducing maintenance requirements and increasing motor lifespan.

3. Battery Care

Store batteries in a cool, dry place away from direct sunlight. Do not expose batteries to water or extreme temperatures. Follow the charging instructions provided with your Makita charger.

4. eXtreme Protection Technology (XPT)

The tool features XPT, which provides enhanced protection against dust, debris, and liquids. While XPT improves durability, it does not make the tool waterproof. Avoid exposing the tool to excessive moisture.

TROUBLESHOOTING

- **Tool Does Not Start:** Ensure the battery is fully charged and properly inserted. Check that the paddle switch lock-off lever is fully engaged before depressing the paddle switch.
- **Tool Stops During Operation:** This may indicate activation of the Active Feedback Sensing Technology (AFT) due to a sudden drop in rotation speed (e.g., kick-back). Release the paddle switch, clear any obstruction, and restart the tool. If the issue persists, check the wheel for damage or excessive wear.
- **Reduced Performance:** Ensure the battery is fully charged. Check the grinding/cutting wheel for wear or damage and replace if necessary. Verify that the correct speed setting is selected for the application.
- **Excessive Vibration:** Check if the grinding wheel is properly installed and balanced. Replace any damaged or unbalanced wheels. Ensure the side handle is securely tightened.

SPECIFICATIONS

Feature	Specification
Model Number	DGA517Z
Power Source	Battery Powered (18V LXT Lithium-Ion)
Voltage	18 Volts
Wattage	504 watts
Maximum Rotational Speed	8500 RPM
Variable Speed	3,000 to 8,500 RPM
Cutting Diameter	5 Inches (125mm)
Item Weight	2.4 kg (5.3 Pounds)
Product Dimensions	35.8L x 16.1W x 13.6H Centimetres
Material	Metal, Plastic, Rubber
Included Components	18V LXT Brushless 5" Grinder (Tool Only), 5" Depressed Centre Wheel (D-20797), Lock Nut Wrench 28 (782424-9), Side Handle (158237-4), Toolless Wheel Cover (123145-8)
Batteries Included?	No (1 A battery required)



Figure 13: Dimensional diagram of the Makita DGA517Z angle grinder, showing length, width, and height measurements.

WARRANTY

The Makita 18V LXT Brushless 5" Angle Grinder DGA517Z comes with a **3-Year Limited Manufacturer Warranty**. Please refer to the official Makita warranty documentation for full terms and conditions. Keep your proof of purchase for warranty claims.

SUPPORT

For further assistance, technical support, or to locate an authorized service center, please visit the official Makita website or contact Makita customer service. You can find more information at the [Makita Store on Amazon](#) or directly through Makita's corporate website.