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> BLACK+DECKER BES510K-GB 400W Corded Mini Circular Saw Instruction Manual

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Model: BES510K-GB

1. INTRODUCTION AND OVERVIEW

This manual provides essential information for the safe and efficient operation of your BLACK+DECKER BES510K-GB 400W Corded Mini Circular Saw. Please read these instructions carefully before using the tool and keep them for future reference. This mini circular saw is designed for cutting various materials including wood, plastic, and certain metals, offering precision and control for a range of DIY tasks.

Key Features:

- Powerful 400W motor for efficient cutting across multiple materials.
- Quick and easy depth adjustment for cutting depths up to 27 mm.
- Enhanced comfort and control with multiple grip positions and an easy-to-use trigger.
- Includes two high-quality blades for versatile cutting applications.
- Spindle lock mechanism for fast and simple blade changes.



Image 1.1: The BLACK+DECKER BES510K-GB 400W Corded Mini Circular Saw. This image shows the compact design of the saw, highlighting its ergonomic handle and blade guard.

2. SAFETY INSTRUCTIONS

Always follow basic safety precautions to reduce the risk of fire, electric shock, and personal injury when using power tools.

- **Work Area Safety:** Keep your 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 such as pipes, radiators, ranges, and refrigerators.
- **Personal Safety:** Always wear eye protection. Use a dust mask, non-skid safety shoes, hard hat, or hearing protection for appropriate conditions. Do not overreach. Keep proper footing and balance at all times.
- **Tool Use and Care:** Do not force the power tool. Use the correct power tool for your application. Disconnect the plug from the power source before making any adjustments, changing accessories, or storing power tools.
- **Specific Circular Saw Safety:** Keep hands away from the cutting area and the blade. Do not reach

underneath the workpiece. Ensure the blade guard is functioning correctly before each use.

3. PACKAGE CONTENTS

Carefully unpack your BLACK+DECKER BES510K-GB Mini Circular Saw and check for the following components:

- BLACK+DECKER Corded Mini Circular Saw Unit
- 24-tooth TCT (Tungsten Carbide Tipped) Blade
- HSS (High-Speed Steel) Wood and Metal Blade
- Dust Extraction Adapter
- Hex Key for blade changes
- Parallel Guide
- Kitbox (Storage Case)



Image 3.1: The mini circular saw shown with its included kitbox, two blades, dust extraction adapter, and parallel guide. This image illustrates all components provided in the package.

4. SETUP

4.1 Blade Installation and Removal

1. **Ensure the tool is unplugged from the power source.**
2. Press and hold the spindle lock button.
3. Using the provided hex key, loosen the blade retaining screw by turning it counter-clockwise.
4. Remove the outer flange and the old blade.
5. Place the new blade onto the spindle, ensuring the teeth are pointing in the direction of rotation indicated by the arrow on the blade guard.
6. Replace the outer flange and tighten the blade retaining screw clockwise with the hex key while holding the spindle lock button. Do not overtighten.



Image 4.1: A user demonstrating how to change the blade on the mini circular saw using the hex key and spindle lock. This image highlights the blade changing process.

4.2 Adjusting Cutting Depth

The cutting depth can be adjusted to match the thickness of your workpiece, up to a maximum of 27 mm.

1. Loosen the depth adjustment lever located on the side of the saw.
2. Move the base plate up or down to achieve the desired cutting depth.
3. Tighten the depth adjustment lever securely to lock the setting.

4.3 Attaching Dust Extraction

For a cleaner work environment, attach the dust extraction adapter to the saw's dust port and connect it to a suitable vacuum cleaner.

5. OPERATING INSTRUCTIONS

5.1 General Operation

1. Ensure the workpiece is securely clamped or held to prevent movement during cutting.
2. Plug the saw into a suitable power outlet.
3. Hold the saw firmly with both hands, utilizing the multiple grip positions for optimal control.
4. Press the trigger to start the saw. Allow the blade to reach full speed before beginning the cut.
5. Guide the saw smoothly along the cutting line, applying steady, even pressure. Do not force the saw.
6. Release the trigger to stop the saw. Wait for the blade to come to a complete stop before setting the tool down.

5.2 Cutting Wood and Plastic

Use the TCT blade for general wood cutting and the HSS blade for finer cuts in wood and plastic. Ensure the cutting depth is set correctly to just clear the bottom of the workpiece.



Image 5.1: A user cutting a wooden board with the mini circular saw, demonstrating proper grip and control. This image shows the saw in action on a common material.



Image 5.2: A user cutting a PVC pipe using the mini circular saw, illustrating its versatility for plastic materials. This image demonstrates cutting a cylindrical object.

5.3 Cutting Metal

For cutting thin metals, use the HSS blade. Always wear appropriate personal protective equipment, including gloves and eye protection. Ensure the workpiece is firmly secured. Proceed with a slower, steady feed rate compared to wood cutting.



Image 5.3: A user cutting a piece of sheet metal with the mini circular saw, showcasing its capability for metalwork. This image emphasizes safety gear during metal cutting.

6. MAINTENANCE

Regular maintenance ensures the longevity and safe operation of your tool.

- **Cleaning:** Keep the ventilation slots clear and clean. Regularly clean the tool housing with a soft cloth, preferably after each use. Do not use abrasive cleaners or solvents.
- **Blade Inspection:** Periodically inspect the blades for sharpness and damage. Replace dull or damaged blades immediately to ensure safe and efficient cutting.
- **Cord Inspection:** Regularly check the power cord for any signs of damage, cuts, or fraying. If damaged, have it repaired by a qualified service technician.
- **Storage:** Store the tool in its kitbox in a dry, secure place out of reach of children.

7. TROUBLESHOOTING

If you encounter issues with your mini circular saw, refer to the following common problems and solutions:

Problem	Possible Cause	Solution
Saw does not start	No power supply; Faulty switch; Damaged cord	Check power connection; Contact service center; Inspect cord for damage
Poor cutting performance	Dull or incorrect blade; Incorrect cutting depth; Forcing the saw	Replace blade or use appropriate blade; Adjust cutting depth; Reduce feed rate

Problem	Possible Cause	Solution
Excessive vibration	Loose blade; Damaged blade; Worn components	Tighten blade screw; Replace blade; Contact service center
Overheating	Blocked ventilation slots; Overloading the tool	Clean ventilation slots; Reduce load, allow tool to cool

8. SPECIFICATIONS

Specification	Value
Brand	BLACK+DECKER
Model Number	BES510K-GB
Power Input	400 W
Voltage	36 Volt (AC/DC)
No-Load Speed	3600 RPM
Max. Cutting Depth	27 mm
Blade Material	High-Speed Steel (HSS), Tungsten Carbide Tipped (TCT)
Number of Teeth (TCT Blade)	24
Recommended Surfaces	Wood, Plastic
Special Features	Corded
Handle Material	Plastic or Composite
Color	Black and Orange

9. WARRANTY AND SUPPORT

BLACK+DECKER provides a warranty for its products. For detailed warranty information, including terms, conditions, and registration, please refer to the official BLACK+DECKER website or the warranty card included with your product.

For technical support, spare parts, or service inquiries, please contact BLACK+DECKER customer service or visit their official support page. Ensure you have your model number (BES510K-GB) and purchase details available when contacting support.

Official Website: www.blackanddecker.com