DEWALT DCS512B

DEWALT XTREME™ 12V MAX BRUSHLESS 5-3/8" CIRCULAR SAW (DCS512B)

User Instruction Manual

Introduction

This manual provides essential information for the safe and effective operation, maintenance, and troubleshooting of your DEWALT XTREME™ 12V MAX BRUSHLESS 5-3/8" Circular Saw, model DCS512B. Please read this manual thoroughly before using the tool to ensure proper handling and to prevent injury or damage.

The DCS512 12V MAX 5-3/8-in Circular Saw, part of DEWALT's XTREME(TM) Sub-Compact Series, delivers powerful and accurate cutting performance across a wide range of materials. Its lightweight and compact design, combined with a 12V MAX lithium-ion battery platform, offers enhanced functionality. Note that the battery and charger are sold separately.

Safety Information

WARNING: California Proposition 65

This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Always wear appropriate personal protective equipment (PPE) including safety glasses, hearing protection, and gloves when operating the circular saw. Ensure your work area is well-lit and clear of obstructions. Keep bystanders away from the operating area.

Product Overview

The DEWALT DCS512B Circular Saw is designed for efficient cutting of various materials, primarily wood. Key features include:

- Powerful and efficient brushless motor for optimal cutting performance.
- Lightweight and compact design for high maneuverability.

- 5-3/8-inch blade size.
- Maximum depth of cut: 1-3/4 inches at 90° and 1-1/4 inches at 45°.
- Built-in rafter hook for convenient storage.
- Tool-free bevel lever for quick adjustment of bevel capacity from 0° to 50°.



Figure 1: Front view of the DEWALT DCS512B Circular Saw, highlighting the blade guard, handle, and motor housing.



Figure 2: Angled view of the DEWALT DCS512B Circular Saw, showing the blade and base plate.



Figure 3: Side view of the DEWALT DCS512B Circular Saw, illustrating the motor and handle design.

Setup

Unpacking

Carefully remove the circular saw and any included accessories from the packaging. Inspect the tool for any damage that may have occurred during shipping. Do not operate the tool if it appears damaged.

Battery Installation (Battery Sold Separately)

This tool operates on a 12V MAX lithium-ion battery. Ensure the battery is fully charged before use. To install the battery, align the battery pack with the receptacle on the tool handle and slide it in until it clicks securely into place. To remove, press the battery release button and slide the battery out.



Figure 4: View of the DEWALT DCS512B Circular Saw, showing the battery insertion point at the base of the handle.

IMPORTANT: This 12V tool is NOT compatible with 20V batteries.



Figure 5: A warning graphic indicating that the 12V tool is not compatible with 20V batteries.

Blade Installation and Removal

Always disconnect the battery pack before installing or removing the blade. Use the provided blade wrench to loosen the arbor nut. Press the spindle lock button to prevent the blade from rotating. Carefully remove the old blade, noting its rotation direction. Install the new 5-3/8 inch blade with the teeth pointing in the direction of rotation indicated on the saw. Tighten the arbor nut securely.

Operating Instructions

Adjusting Depth of Cut

To adjust the depth of cut, loosen the depth adjustment knob. Raise or lower the base plate to achieve the desired cutting depth. Ensure the blade extends approximately 1/8 inch below the material being cut. Tighten the depth adjustment knob

firmly before operation.

Adjusting Bevel Angle

The tool-free bevel lever allows for quick adjustment of the bevel angle. Loosen the bevel lever, tilt the saw base to the desired angle (0° to 50°), and then secure the lever firmly. Always ensure the bevel angle is locked before making a cut.



Figure 6: Close-up view of the DEWALT DCS512B Circular Saw's bevel adjustment mechanism, showing angle markings.

Making a Cut

1. Secure the workpiece: Always clamp the material firmly to prevent movement during cutting.
2. Align the saw: Position the saw so the blade aligns with your cut line.
3. Start the saw: Depress the trigger switch to start the motor. Allow the blade to reach full speed before entering the material.
4. Begin cutting: Guide the saw smoothly and steadily through the material. Do not force the saw.
5. Complete the cut: Continue through the material until the cut is complete. Release the trigger switch and allow the blade to stop completely before lifting the saw from the workpiece.



Figure 7: The DEWALT DCS512B Circular Saw in action, demonstrating a cut on a wooden board.

Dust Collection

The saw is equipped with a dust port for connecting to a vacuum system, helping to keep your work area clean and improve visibility. Ensure the dust port is clear of debris before and after use.



Figure 8: Close-up view of the DEWALT DCS512B Circular Saw's dust extraction port.



Figure 9: A separate dust port attachment, designed for use with the DEWALT circular saw.

Maintenance

Cleaning

Regularly clean the saw to remove dust and debris. Use a soft brush or compressed air to clear ventilation openings. Do not use solvents or harsh chemicals, as they may damage plastic parts.

Blade Care

Inspect the blade regularly for sharpness and damage. A dull or damaged blade can cause kickback and reduce cutting efficiency. Replace blades as needed. Ensure the blade is clean and free of resin buildup.

Storage

Store the circular saw in a dry, secure location out of reach of children and unauthorized users. Disconnect the battery pack before storing. The built-in rafter hook can be used for convenient storage on a jobsite or in a workshop.

Troubleshooting

Problem	Possible Cause	Solution

Problem	Possible Cause	Solution
Saw does not start	Battery not installed correctly or discharged; Faulty switch	Ensure battery is fully charged and properly seated. If problem persists, contact DEWALT service.
Blade binds or cuts slowly	Dull or dirty blade; Incorrect depth of cut; Forcing the saw	Replace or clean blade. Adjust depth of cut. Allow saw to work at its own pace.
Excessive vibration	Damaged blade; Loose blade or arbor nut	Inspect and replace damaged blade. Ensure blade and arbor nut are securely fastened.

Specifications

Feature	Detail
Brand	DEWALT
Model Number	DCS512B
Power Source	Battery Powered
Voltage	12 Volts
Blade Material	High Speed Steel
Blade Length	8 Inches
Number of Teeth	24
Cutting Angle	90 Degrees (Max)
Max Depth of Cut (90°)	1-3/4 inches
Max Depth of Cut (45°)	1-1/4 inches
Bevel Capacity	0 - 50 degrees
Item Weight	6.16 pounds (2.8 Kilograms)
Product Dimensions	15.69"L x 7.03"W x 8.32"H
Surface Recommendation	Wood
Special Feature	Brushless Motor
Included Components	Tool Only
UPC	885911721523

Warranty and Support

This DEWALT product comes with a Limited Warranty. For specific details regarding the warranty period, coverage, and terms, please refer to the warranty card included with your purchase or visit the official DEWALT website.
For technical support, service, or to locate an authorized service center, please contact DEWALT customer service or visit their official website:

- DEWALT Official Website: www.dewalt.com
- DEWALT Store on Amazon: Visit the DEWALT Store

Please have your model number (DCS512B) and serial number (if applicable) ready when contacting support.

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Model: DCS512B

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Example: How do I reset this device or fix this error?

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