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Makita CB442

Makita CB442 Carbon Brush Set User Manual

Model: CB442

Introduction

This manual provides essential information for the proper installation, maintenance, and troubleshooting of your Makita CB442 Carbon Brush Set. Please read this manual thoroughly before use to ensure safe and efficient operation.
The Makita CB442 Carbon Brush Set is an O.E.M. authorized replacement part designed to fit various Makita power tool models. Carbon brushes are critical components in electric motors, facilitating the transfer of electrical current to the rotating armature.

Product Overview



Figure 1: Makita CB442 Carbon Brush Set. The image shows the red and black retail packaging for the CB-442 carbon brushes, with two individual carbon brushes, springs, and copper terminals displayed in front of the box. The packaging indicates "CB-442" and "Makita" branding.

The Makita CB442 Carbon Brush Set includes two carbon brushes, designed for specific Makita power tools. These brushes are essential for maintaining the electrical contact within the motor, ensuring consistent performance.

Key Features:

- O.E.M. authorized replacement part.
- Designed for various Makita models.
- Ensures proper electrical contact in power tool motors.
- Durable carbon material for extended life.

Setup and Installation

Replacing carbon brushes requires basic mechanical aptitude and adherence to safety precautions. Always refer to your specific power tool's user manual for detailed instructions on accessing the brush holders.

Safety Precautions:

- **Always disconnect the power tool from the power source**before attempting any maintenance or installation.
- Wear appropriate personal protective equipment (PPE), such as safety glasses.
- Ensure the work area is clean and well-lit.

Installation Steps:

1. **Locate Brush Holders:** Identify the carbon brush access caps or covers on your Makita power tool. These are typically located on the sides of the motor housing.
2. **Remove Old Brushes:** Using a screwdriver or appropriate tool, carefully unscrew and remove the brush caps. Gently pull out the old carbon brushes and their springs. Note their orientation.
3. **Inspect Commutator:** While the brushes are out, inspect the commutator (the copper segments on the armature). It should be clean and free of excessive scoring or burning. If necessary, clean it gently with a non-abrasive material.
4. **Insert New Brushes:** Carefully insert the new Makita CB442 carbon brushes into the brush holders. Ensure the curved face of the brush (if applicable) matches the curvature of the commutator. The spring should apply firm, even pressure to the brush.
5. **Secure Brush Caps:** Replace and tighten the brush caps securely. Do not overtighten.
6. **Test Operation:** Reconnect the power tool to the power source. Run the tool briefly at a low speed to allow the new brushes to seat properly. It is normal for new brushes to spark slightly during initial use; this should diminish as they wear in.

Operating Considerations

Once new carbon brushes are installed, the power tool should operate as intended. Pay attention to the tool's performance during the first few hours of use.

- **Break-in Period:** New carbon brushes may require a short break-in period (typically a few minutes of light operation) to conform to the shape of the commutator. During this time, minor sparking is normal.
- **Monitor Performance:** Listen for unusual noises or observe excessive sparking, which could indicate improper installation or other motor issues.

Maintenance

Regular inspection of carbon brushes is crucial for the longevity and performance of your power tool. Carbon brushes are wear items and will eventually need replacement.

Inspection Frequency:

The frequency of inspection depends on the tool's usage. For professional use, inspect brushes every 50-100 hours of operation. For occasional home use, inspect annually or if performance issues arise.

What to Look For:

- **Brush Length:** Replace brushes when they are worn down to approximately 1/4 inch (6mm) or less. Many Makita tools have a wear indicator line on the brush.
- **Cracks or Chips:** Replace any brushes that are cracked, chipped, or otherwise damaged.
- **Excessive Sparking:** While some sparking is normal, excessive or continuous sparking at the commutator indicates worn brushes or other motor problems.

Always replace both carbon brushes at the same time, even if one appears less worn. This ensures balanced current transfer and optimal motor performance.

Troubleshooting

If your power tool exhibits issues after carbon brush replacement, consider the following common problems and solutions:

Problem	Possible Cause	Solution
Tool does not start or runs intermittently.	Brushes not seated correctly; Worn brushes (if not new); Dirty commutator; Other internal motor issue.	Re-seat brushes, ensure caps are tight; Replace brushes if worn; Clean commutator; Consult a qualified technician.
Excessive sparking at the motor.	Brushes not seated properly; Commutator dirty or damaged; Incorrect brush type; Overload.	Check brush seating; Clean or inspect commutator; Ensure correct CB442 brushes are used; Reduce load on tool.
Reduced power or speed.	Worn brushes; Dirty commutator; Other motor component failure.	Replace brushes; Clean commutator; Seek professional repair.

If troubleshooting steps do not resolve the issue, it is recommended to consult a qualified Makita service center or a professional power tool repair technician.

Specifications

Part Number:	CB442
Brand:	Makita
Item Model Number:	CB442
Item Weight:	0.01 ounces (approx. 0.28 grams)
Product Dimensions:	7 x 5 x 3 inches (packaging dimensions)
Item Package Quantity:	1 (set of two brushes)

Number Of Pieces:	1 (set)
Grit Material:	Carbon Steel (refers to brush material composition)
Bristle Type:	Crimped Wire (likely refers to the spring/wire connection, not the brush itself)
Manufacturer:	Makita
Date First Available:	June 18, 2015

Warranty and Support

As an O.E.M. replacement part, the Makita CB442 Carbon Brush Set is typically covered under the standard warranty terms for genuine Makita replacement parts. Please retain your proof of purchase.

Warranty Information:

For specific warranty details, please refer to the warranty policy provided with your original Makita power tool or visit the official Makita website. Warranty coverage generally applies to defects in materials and workmanship.

Customer Support:

For technical assistance, questions regarding compatibility, or service inquiries, please contact Makita customer support directly or visit their official website:

- **Makita Official Website:** www.makitatools.com
- **Makita Store on Amazon:** Visit the Makita Store

When contacting support, please have your tool's model number and the CB442 part number available.

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