

## Mercedes-Benz 166 421 01 81

# Mercedes-Benz 166 421 01 81 Disc Brake Caliper Instruction Manual

Genuine Mercedes-Benz Part

## INTRODUCTION

This instruction manual provides important information regarding the Mercedes-Benz 166 421 01 81 Disc Brake Caliper. It covers installation guidelines, operational principles, maintenance recommendations, and troubleshooting tips to ensure the safe and effective performance of this genuine Mercedes-Benz component. For optimal safety and performance, installation and maintenance should be performed by qualified automotive technicians.

## BRAKE SYSTEM COMPONENTS DIAGRAM

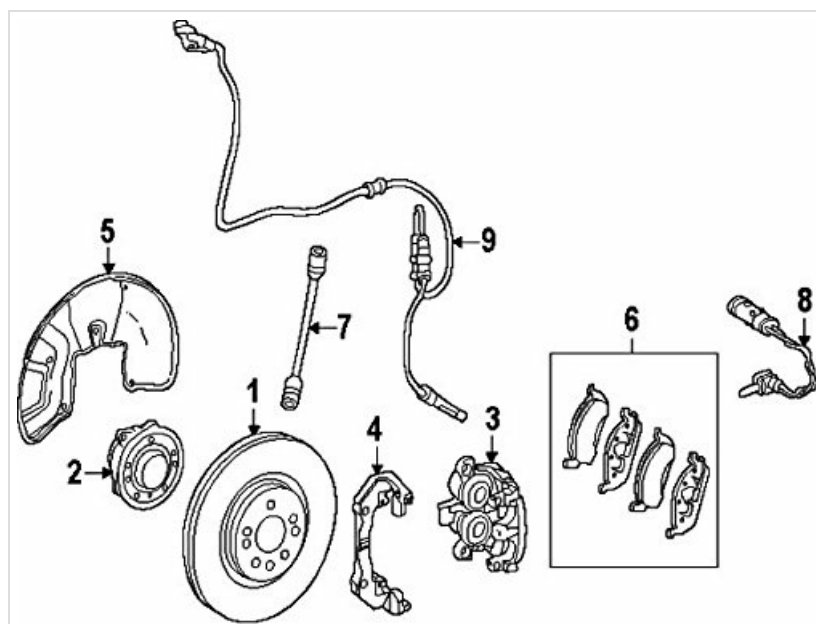


Figure 1: Exploded view of typical disc brake components. This diagram illustrates the various parts of a disc brake system, including (1) brake disc, (2) wheel hub, (3) brake caliper, (4) caliper bracket, (5) dust shield, (6) brake pads, (7) brake hose, (8) brake wear sensor, and (9) ABS sensor cable. The Mercedes-Benz 166 421 01 81 is the disc brake caliper

## SETUP AND INSTALLATION

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The Mercedes-Benz 166 421 01 81 Disc Brake Caliper is a critical component of your vehicle's braking system. Proper installation is paramount for safety and performance. It is strongly recommended that installation be performed by a certified Mercedes-Benz technician or a qualified automotive professional.

### General Installation Steps (Professional Installation Recommended):

1. **Vehicle Preparation:** Safely lift and support the vehicle. Remove the wheel.
2. **Old Caliper Removal:** Disconnect the brake line and parking brake cable (if applicable). Remove the caliper mounting bolts and carefully detach the old caliper.
3. **Brake System Inspection:** Inspect the brake rotor, brake pads, brake lines, and other related components for wear or damage. Replace as necessary.
4. **New Caliper Installation:** Mount the new Mercedes-Benz 166 421 01 81 Disc Brake Caliper onto the caliper bracket and secure it with the appropriate mounting bolts, torquing to manufacturer specifications.
5. **Brake Line Connection:** Reconnect the brake line to the new caliper. Ensure a tight, leak-free connection.
6. **Bleeding the Brake System:** Bleed the brake system to remove any air introduced during the installation process. This is crucial for restoring proper brake pedal feel and function.
7. **Final Checks:** Reinstall the wheel. Lower the vehicle. Test the brakes in a safe environment before normal operation. Check for fluid leaks.

Refer to the official Mercedes-Benz service manual for your specific vehicle model for detailed, step-by-step instructions and torque specifications.

## OPERATING PRINCIPLE

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The disc brake caliper is a fundamental component of your vehicle's hydraulic braking system. When the brake pedal is pressed, hydraulic pressure from the master cylinder forces pistons within the caliper to clamp the brake pads against the rotating brake rotor. This friction converts the vehicle's kinetic energy into heat, slowing and stopping the vehicle. The Mercedes-Benz 166 421 01 81 Disc Brake Caliper is engineered to provide precise and consistent braking force, contributing to the overall safety and control of your vehicle.

## MAINTENANCE

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Regular inspection and maintenance of your braking system are essential for safety and longevity. While the caliper itself is a durable component, its proper function relies on the condition of surrounding parts.

- **Brake Fluid:** Check brake fluid level and condition regularly as per your vehicle's service schedule. Brake fluid should be replaced periodically.
- **Brake Pads:** Inspect brake pads for wear during tire rotations or at least annually. Replace pads when they reach their minimum thickness.
- **Brake Rotors:** Check rotors for excessive wear, scoring, or warping. Replace or resurface as needed.
- **Caliper Inspection:** During brake service, inspect the caliper for leaks, seized pistons, or damaged guide pins. Ensure guide pins are properly lubricated.
- **Brake Lines:** Inspect brake lines for cracks, corrosion, or leaks.

Always use genuine Mercedes-Benz parts and approved brake fluid for replacements.

## TROUBLESHOOTING COMMON BRAKE ISSUES

If you experience any of the following symptoms, it is crucial to have your braking system inspected by a qualified technician immediately.

- Symptom:** Squealing or grinding noises during braking.  
**Possible Cause:** Worn brake pads, foreign object, or caliper issue.
- Symptom:** Vehicle pulls to one side when braking.  
**Possible Cause:** Uneven brake pad wear, seized caliper piston, or contaminated brake fluid.
- Symptom:** Soft or spongy brake pedal.  
**Possible Cause:** Air in the brake lines, low brake fluid, or master cylinder issue.
- Symptom:** Pulsating brake pedal or steering wheel vibration during braking.  
**Possible Cause:** Warped brake rotors.
- Symptom:** Brake fluid leak.  
**Possible Cause:** Damaged brake line, caliper seal, or master cylinder.

Do not attempt to drive a vehicle with compromised brakes. Seek professional assistance.

## SPECIFICATIONS

Part Number:	166 421 01 81
Brand:	Mercedes-Benz
Type:	Disc Brake Caliper
Manufacturer:	Mercedes-Benz
OEM Part Number:	166 421 01 81
ASIN:	B00KWF2R5Y
Date First Available:	June 10, 2014

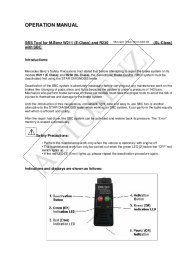
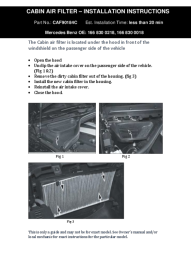
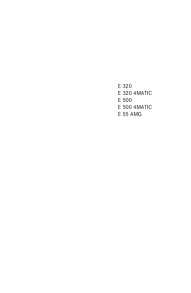
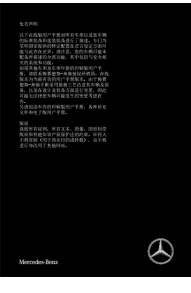
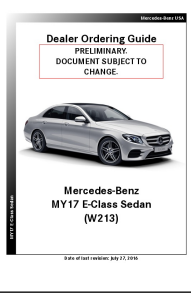

## WARRANTY INFORMATION

Genuine Mercedes-Benz parts are typically covered by a manufacturer's warranty against defects in materials and workmanship. The specific terms and duration of the warranty may vary. Please retain your proof of purchase and consult your authorized Mercedes-Benz dealer or the official Mercedes-Benz warranty documentation for detailed information regarding your specific part.

## CUSTOMER SUPPORT

For technical assistance, warranty claims, or further information regarding the Mercedes-Benz 166 421 01 81 Disc Brake Caliper, please contact your authorized Mercedes-Benz service center or dealer. You can also visit the official Mercedes-Benz website for support resources.

**Mercedes-Benz Official Website:** [www.mercedes-benz.com](http://www.mercedes-benz.com)

	<p><a href="#">Operation Manual: SBC Tool for Mercedes-Benz W211 (E-Class) and R230 (SL-Class) with SBC</a></p> <p>This operation manual provides detailed instructions for using the SBC Tool with Mercedes-Benz W211 (E-Class) and R230 (SL-Class) vehicles equipped with the Sensotronic Brake Control (SBC) system. It covers safety precautions, deactivation, reactivation, and troubleshooting procedures.</p>
	<p><a href="#">Mercedes-Benz Cabin Air Filter Installation Guide (CAF90184C)</a></p> <p>Step-by-step installation instructions for a Mercedes-Benz cabin air filter (Part No. CAF90184C), including OE numbers and estimated installation time.</p>
	<p><a href="#">Mercedes-Benz E-Class Operator's Manual: E 320, E 500, E 55 AMG</a></p> <p>Comprehensive operator's manual for Mercedes-Benz E-Class vehicles (E 320, E 500, E 55 AMG). Covers operation, safety, controls, maintenance, and technical specifications. Essential guide for owners.</p>
	<p><a href="#">- CLA (X118) 2024 - MBUX</a></p> <p>- CLA (X118) 2024 MBUX ,</p>
	<p><a href="#">Mercedes-Benz MY17 E-Class Sedan (W213) Dealer Ordering Guide</a></p> <p>Official dealer ordering guide for the Mercedes-Benz MY17 E-Class Sedan (W213). Details specifications, packages, options, paints, trims, wheels, and competitive comparisons for the 2017 E-Class model.</p>
	<p><a href="#">Mercedes Enthusiast Magazine: 40 Years of the W201 190 'Baby Benz', RennTech S76R, AMG &amp; EVs</a></p> <p>The October/November 2022 issue of Mercedes Enthusiast magazine celebrates the 40th anniversary of the W201 190 'Baby Benz', showcases the high-performance RennTech S76R and AMG models, explores classic restorations, and delves into the latest electric vehicles from Mercedes-Benz. Features include buyer's guides, restoration stories, and motorsport insights.</p>

