

Bosch 20010306

BOSCH 20010306 QuietCast Premium Disc Brake Rotor Instruction Manual

1. PRODUCT OVERVIEW

The Bosch QuietCast Premium Disc Brake Rotor (Model 20010306) is engineered for superior braking performance and durability. Designed with minimum tolerance levels and innovative materials, it ensures high quality and quiet, vibration-free operation. This front disc brake rotor is compatible with select Ford Explorer, Ranger; Mazda B3000, B4000; and Mercury Mountaineer models.

Key Features:

- **Precision Balanced:** All QuietCast rotors are factory mill precision balanced, ensuring even weight distribution for smooth, safe stops without pedal pulsation.
- **Enhanced Performance:** OEM style vane configurations provide efficient heat dissipation, reduced vibration for quieter operation, and extended rotor life.
- **Rust and Corrosion Resistant:** An Aluminum/Zinc coating protects against rust and corrosion, prolonging rotor life and maintaining a clean appearance, especially with open wheel designs.
- **ABS and Traction Control Ready:** Features OEM style ABS tone rings (where applicable) for trouble-free operation of Antilock Brake and Traction Control systems.
- **Authentic Bosch Product:** Each rotor includes an engraved discard thickness indicator and the Bosch brand name, confirming authenticity and providing a clear wear limit.

2. COMPATIBILITY

This front disc brake rotor (286mm) is compatible with the following vehicles. Please verify specific vehicle fitment details using a fit checker or your vehicle's service manual, as trim level or engine size may affect compatibility:

- **FORD:** 1995-2001 Explorer, 1998-2002 Ranger
- **MAZDA:** 1998-2002 B3000, 1998-2003 B4000
- **MERCURY:** 1997-2001 Mountaineer

3. WHAT'S IN THE BOX

- 1 x BOSCH 20010306 QuietCast Premium Disc Brake Rotor
- Instruction Manual

4. INSTALLATION INSTRUCTIONS

Important: Brake system components are critical for vehicle safety. Installation should only be performed by a qualified mechanic or an individual with appropriate automotive repair experience. Always consult your vehicle's specific service manual for detailed, step-by-step instructions and torque specifications.

General Steps (Consult Vehicle Service Manual for Specifics):

1. **Preparation:** Park the vehicle on a level surface, engage the parking brake, and block the rear wheels. Loosen the lug nuts on the wheel to be removed.
2. **Lift and Secure:** Safely lift the vehicle using a jack and support it with jack stands. Remove the wheel.
3. **Remove Caliper:** Unbolt the brake caliper from its mounting bracket. Do not let the caliper hang by the brake hose; support it with a wire or bungee cord.
4. **Remove Caliper Bracket:** Remove the bolts securing the caliper mounting bracket and set it aside.
5. **Remove Old Rotor:** The old disc brake rotor may be held in place by retaining clips or screws. Remove these, then slide the old rotor off the wheel hub. If stuck, a rubber mallet may be used to gently tap it loose.
6. **Clean Hub Surface:** Thoroughly clean the wheel hub surface to remove any rust, dirt, or debris. A clean mounting surface is crucial for proper rotor seating and to prevent run-out.
7. **Install New Rotor:** Place the new BOSCH QuietCast Premium Disc Brake Rotor onto the wheel hub. Ensure it sits flush against the hub.
8. **Reinstall Caliper Bracket:** Reattach the caliper mounting bracket and torque the bolts to the manufacturer's specifications.
9. **Install New Brake Pads (Recommended):** It is highly recommended to replace brake pads when installing new rotors. Install new brake pads into the caliper bracket.
10. **Reinstall Caliper:** Carefully slide the caliper over the new pads and rotor. Reinstall the caliper bolts and torque them to specifications.
11. **Bleed Brakes (If necessary):** If brake lines were opened, bleed the brake system according to your vehicle's service manual.
12. **Reinstall Wheel:** Mount the wheel, hand-tighten the lug nuts, lower the vehicle, and then torque the lug nuts to the manufacturer's specifications in a star pattern.
13. **Repeat for Other Side:** Always replace brake rotors and pads in pairs (both front or both rear).

Visual Aid: BOSCH QuietCast Rotor

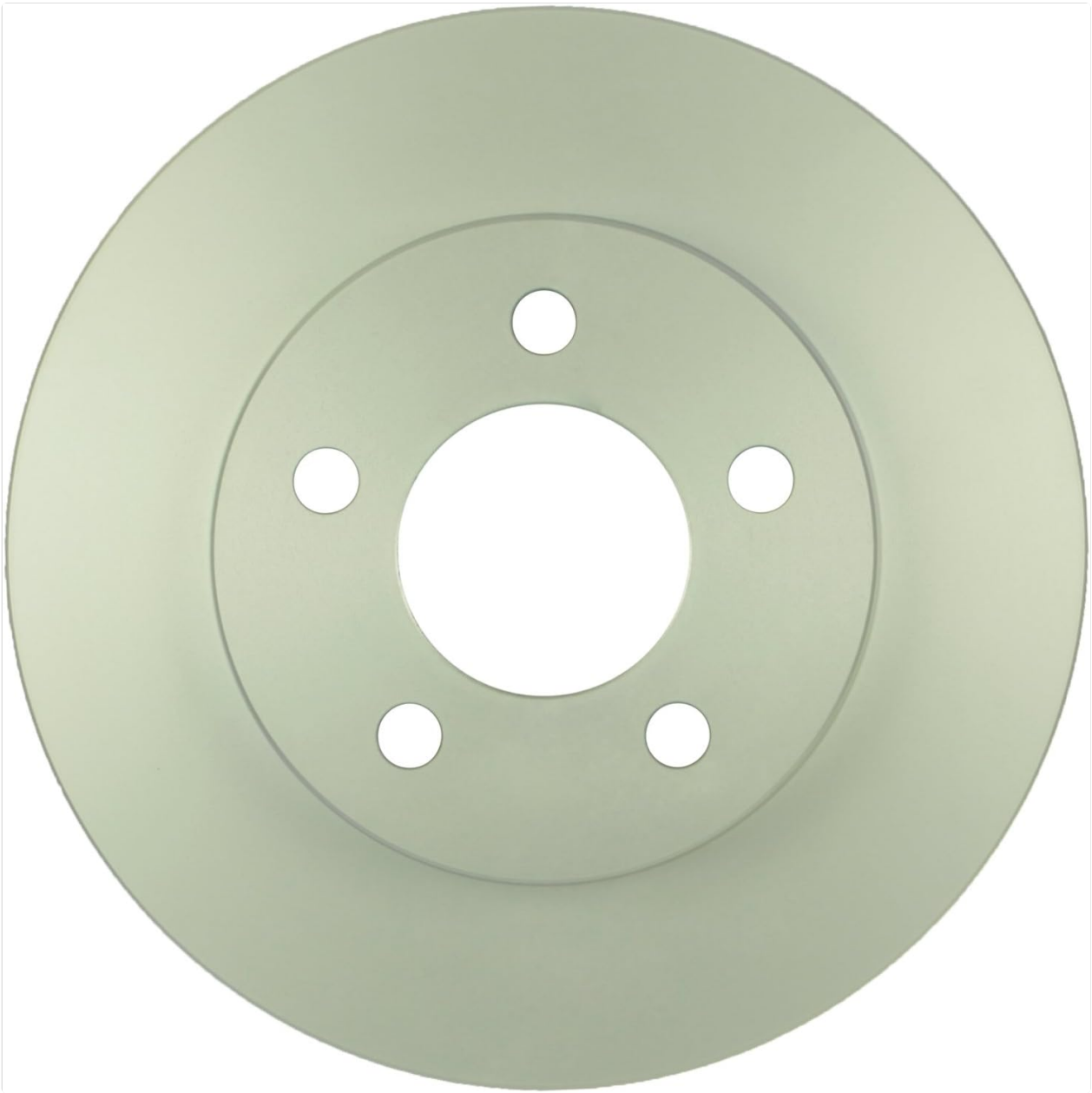


Figure 1: Top-down view of the BOSCH 20010306 QuietCast Premium Disc Brake Rotor, showcasing its clean, unblemished surface and central hub with five bolt holes.



Figure 2: Side profile of the BOSCH QuietCast Premium Disc Brake Rotor, highlighting the internal vane structure designed for efficient heat dissipation.

Related Video: Bosch Braking QuietCast Premium Disc Brake Rotor

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Video 1: A short overview of the Bosch QuietCast Premium Disc Brake Rotor, highlighting its features and benefits for quiet and reliable braking performance.

Related Video: Disc Thickness Variation Explained

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Video 2: An informational video explaining disc thickness variation (DTV), a common issue with brake rotors, and how it can affect braking performance. This video provides context on why precision-balanced rotors are important.

5. OPERATING INFORMATION

Brake Pad Bedding-In Procedure:

After installing new brake rotors and pads, a proper bedding-in procedure is crucial for optimal performance and longevity. This process transfers a thin, even layer of friction material from the pads to the rotor surface, ensuring consistent braking and reducing noise and vibration.

1. Drive the vehicle at a moderate speed (e.g., 30-40 mph).
2. Apply the brakes firmly but not aggressively, reducing speed to about 10 mph. Do not come to a complete stop.
3. Repeat this process 4-5 times, allowing a few minutes between each stop for the brakes to cool slightly.
4. After the initial stops, drive the vehicle for several miles without heavy braking to allow the brakes to cool completely.
5. Avoid hard braking or prolonged braking (e.g., riding the brakes down a long hill) for the first 200-300 miles after installation.

Following this procedure helps prevent uneven pad deposits and ensures smooth, quiet, and effective braking.

6. MAINTENANCE

Regular inspection and maintenance of your brake system are essential for safety and performance. The BOSCH QuietCast Premium Disc Brake Rotor is designed for durability, but proper care extends its lifespan.

Recommended Maintenance:

- **Routine Inspection:** Have your brake system, including rotors, pads, and calipers, inspected by a qualified technician at least once a year or every 12,000 miles, whichever comes first.
- **Check for Wear:** Monitor the rotor surface for signs of excessive wear, scoring, or grooving. The engraved discard thickness on the rotor indicates when it has reached the end of its useful life and requires replacement.
- **Cleanliness:** Keep wheels and brake components free from excessive dirt, road salt, and debris, which can contribute to corrosion and uneven wear.
- **Brake Fluid:** Check brake fluid level and condition regularly. Replace brake fluid according to your vehicle manufacturer's recommendations.

Related Video: Bosch Brake Pads - Engineering and Manufacturing Quality

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Video 3: This video showcases the engineering and manufacturing quality of Bosch brake pads, demonstrating the rigorous testing and production processes that ensure high-performance and reliable braking components.

7. TROUBLESHOOTING

If you experience any issues with your brake system, consult a qualified mechanic immediately. Below are

common brake-related symptoms and potential causes:

Symptom	Potential Cause	Action
Pulsating Brake Pedal / Steering Wheel Vibration	Disc Thickness Variation (DTV), warped rotor, uneven pad deposits.	Inspect rotors for run-out and DTV. May require rotor resurfacing or replacement. Ensure proper bedding-in.
Squealing or Grinding Noise	Worn brake pads (wear indicator), foreign object, improper pad installation, glazed rotors.	Inspect brake pads and rotors. Replace worn pads. Clean and lubricate caliper components.
Vehicle Pulls to One Side During Braking	Sticking caliper, contaminated brake fluid, uneven brake pad wear, brake hose issue.	Inspect calipers, brake hoses, and pads. Bleed brake system.
Soft or Spongy Brake Pedal	Air in the brake lines, low brake fluid, faulty master cylinder, brake fluid leak.	Check brake fluid level. Inspect for leaks. Bleed brake system. Inspect master cylinder.

8. SPECIFICATIONS

Specification	Detail
Brand	Bosch
Model Number	20010306
Material	Application Specific, Cast Iron
Exterior Finish	Zinc (Corrosion Protection)
Vehicle Service Type	Automotive
Position	Front
Item Weight	16 pounds
Product Dimensions	11.42 x 11.42 x 2.76 inches
UPC	077212079742
Global Trade Identification Number	00077212079742
Manufacturer	Bosch Automotive

9. WARRANTY AND SUPPORT

For specific warranty information, product support, or technical assistance regarding your BOSCH 20010306 QuietCast Premium Disc Brake Rotor, please refer to the official Bosch Automotive website or contact your authorized Bosch retailer. Keep your proof of purchase for any warranty claims.

