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Campagnolo WTO DB (WC435BAP8A110)

Campagnolo Bora WTO 45 DB Tubeless Road and Gravel Wheelset Instruction Manual

1. INTRODUCTION

This manual provides essential information for the proper installation, operation, maintenance, and troubleshooting of your Campagnolo Bora WTO 45 DB Tubeless Road and Gravel Wheelset. Designed for high-performance cycling, these wheels feature advanced aerodynamic carbon rims, G3 spoke lacing, and 2-Way-Fit technology for versatile tire compatibility. Please read this manual thoroughly before using your wheelset to ensure safety and optimal performance.



This image displays the Campagnolo Bora WTO 45 DB wheelset, highlighting its carbon fiber construction, 45mm aerodynamic rim profile, and the distinctive G3 spoke lacing pattern. The wheel is designed for both road and gravel cycling.

2. KEY FEATURES

- **Aerodynamic Carbon Rims:** Full carbon construction with a 45mm wind tunnel optimized (WTO) profile for superior aerodynamics and reduced drag.
- **G3 Spoke Lacing Pattern:** Innovative lacing with twice the spokes on one side for improved handling, increased stiffness, and exceptional power transfer.
- **2-Way-Fit Technology:** Versatile compatibility for both tubed and tubeless tires, offering lower rolling resistance and enhanced puncture protection.
- **Ceramic USB Bearings:** Equipped with ceramic USB cups and cone bearings for smooth, efficient rotation and reduced maintenance.
- **Hand-Assembled Quality:** Each wheelset is precision hand-assembled by Campagnolo's skilled technicians, ensuring durability and reliable performance.
- **Disc Brake Specific:** Designed for disc brake systems, ensuring powerful and consistent braking performance.

3. COMPONENTS INCLUDED

The Campagnolo Bora WTO 45 DB Wheelset package includes the following:

- Front Wheel (1x)
- Rear Wheel (1x)
- User Manual (this document)

Note: Tires, cassette, brake rotors, and thru-axles are typically sold separately unless specified by your retailer.

4. SETUP

4.1 Wheel Installation

1. **Inspect Wheels:** Before installation, carefully inspect both wheels for any signs of damage from shipping.
2. **Install Brake Rotors:** Mount your disc brake rotors onto the wheel hubs according to the rotor manufacturer's instructions. Ensure proper torque specifications are met.
3. **Install Cassette:** For the rear wheel, install your 10-13 speed compatible cassette onto the freehub body. Ensure the cassette is fully seated and the lockring is tightened to the manufacturer's specified torque.
4. **Mount Wheels to Bicycle:** Insert the front and rear wheels into your bicycle's fork and frame dropouts, respectively. Ensure the thru-axles (12x142mm rear, 12x100mm front) are correctly aligned and tightened to the bicycle manufacturer's specifications.
5. **Adjust Brakes:** After installation, adjust your disc brakes to ensure proper alignment and clearance with the rotors.

4.2 Tire Installation (2-Way-Fit Tubeless Ready)

The Bora WTO 45 DB wheels are 2-Way-Fit, meaning they are compatible with both tubeless and clincher (with inner tube) tires.

For Tubeless Setup:

1. **Check Rim Tape:** Ensure the tubeless rim tape is properly installed and sealed across the rim bed. If not pre-installed or if damaged, apply new tubeless-specific rim tape.
2. **Install Tubeless Valve:** Insert the tubeless valve stem through the valve hole in the rim and tighten the lockring by hand until snug.
3. **Mount Tire:** Carefully mount the tubeless tire onto the rim, ensuring the tire beads are seated correctly within the rim channel. Use tire levers if necessary, but avoid pinching the rim tape.
4. **Add Sealant:** Once one side of the tire is fully seated and the other is mostly seated, add the recommended amount of tubeless sealant through the valve stem (with the valve core removed) or directly into the tire before fully seating the second bead.
5. **Inflate Tire:** Inflate the tire rapidly using a floor pump or air compressor until both beads audibly snap into place. Inflate to the maximum recommended pressure for the tire, then reduce to your desired riding pressure.
6. **Distribute Sealant:** Rotate and shake the wheel to ensure the sealant coats the inside of the tire and seals any small leaks.

For Clincher Setup (with inner tube):

1. **Install Rim Strip:** If using an inner tube, ensure a protective rim strip is installed over the spoke holes to

prevent punctures.

2. **Mount One Tire Bead:** Mount one bead of the clincher tire onto the rim.
3. **Insert Inner Tube:** Slightly inflate the inner tube and insert it into the tire, ensuring the valve stem passes through the rim's valve hole.
4. **Mount Second Tire Bead:** Carefully mount the second bead of the tire onto the rim, ensuring the inner tube is not pinched between the tire bead and the rim.
5. **Inflate Tire:** Inflate the tire to your desired riding pressure, staying within the tire manufacturer's recommended pressure range.

5. OPERATING GUIDELINES

5.1 Riding Conditions

The Campagnolo Bora WTO 45 DB wheelset is engineered for both road and gravel cycling. Its robust construction and aerodynamic profile provide excellent performance across varied terrains. Always ride within your skill level and adhere to local traffic laws and safety regulations.

5.2 Tire Pressure

Optimal tire pressure depends on rider weight, tire width, and riding conditions. Always refer to the tire manufacturer's recommended pressure range printed on the tire sidewall. For tubeless setups, slightly lower pressures can often be used for increased comfort and grip without risking pinch flats.

5.3 Braking

These wheels are designed exclusively for disc brakes. Ensure your disc brake system is properly maintained and adjusted for consistent and reliable stopping power. Avoid sudden or prolonged braking on descents to prevent overheating of rotors and pads.

6. MAINTENANCE

Regular maintenance is crucial for the longevity and performance of your Campagnolo Bora WTO 45 DB wheelset.

6.1 Cleaning

- Clean rims, spokes, and hubs regularly with mild soap and water. Avoid harsh chemicals or abrasive cleaners that could damage the carbon finish or hub components.
- Rinse thoroughly with clean water and dry with a soft cloth.
- Pay attention to cleaning around the brake rotors and calipers to prevent contamination.

6.2 Bearing Inspection

- Periodically check the ceramic USB bearings for smooth rotation and any signs of play.
- If you detect roughness or excessive play, consult a qualified bicycle mechanic for inspection and service. Do not attempt to disassemble the hubs without proper tools and knowledge.

6.3 Spoke Tension and Truing

- Regularly inspect spokes for damage or looseness.
- If a wheel becomes untrue or spokes are loose, have it serviced by a professional mechanic. The G3 lacing

pattern requires specific knowledge for proper truing.

6.4 Tubeless Sealant

- For tubeless setups, sealant typically needs to be refreshed every 3-6 months, depending on the sealant type and riding conditions.
- Check the sealant level periodically and add more as needed to maintain puncture protection.

7. TROUBLESHOOTING

7.1 Wheel Wobble or Lateral Play

- **Check Thru-Axle:** Ensure thru-axles are properly tightened.
- **Inspect Bearings:** Excessive play may indicate worn or improperly adjusted hub bearings. Seek professional service.
- **Wheel Trueness:** A wobbly wheel may need truing. Consult a qualified mechanic.

7.2 Bearing Noise (Grinding/Clicking)

- **Contamination:** Bearings may be contaminated with dirt or water.
- **Wear:** Bearings may be worn out. Professional inspection and replacement are recommended.

7.3 Tubeless Leaks or Air Loss

- **Insufficient Sealant:** Add more tubeless sealant.
- **Improper Tire Seating:** Re-inflate the tire to ensure beads are fully seated.
- **Damaged Rim Tape/Valve:** Inspect rim tape for tears and valve for proper sealing. Replace if necessary.
- **Puncture:** For larger punctures, the sealant may not be sufficient. A tire plug or inner tube may be required.

7.4 Brake Rub

- **Caliper Alignment:** Realign brake calipers to ensure proper clearance with the rotor.
- **Rotor Trueness:** Check if the brake rotor is bent. A bent rotor may need to be trued or replaced.
- **Wheel Seating:** Ensure the wheel is fully and correctly seated in the dropouts and the thru-axle is tight.

8. SPECIFICATIONS

Feature	Specification
Brand	Campagnolo
Model Name	WTO DB
Part Number	WC435BAP8A110
Material	Carbon Fiber, Ceramic Bearings
Color	Black

Feature	Specification
Wheel Size	700C (700 Inches)
Rim Profile	45mm (Wind Tunnel Optimized)
Rim Width	27 Inches (External)
Spoke Count	24F/24R (G3 Lacing)
Axle Compatibility	Thru-Axle (e.g., 12x100mm front, 12x142mm rear)
Cassette Compatibility	10-13 Speed
Tire Compatibility	2-Way-Fit (Tubeless / Clincher)
Item Weight	Approximately 9.73 Pounds (Package Weight)

9. WARRANTY AND SUPPORT

9.1 Warranty Information

The Campagnolo Bora WTO 45 DB Wheelset comes with a **Limited Warranty**. Please refer to the official Campagnolo warranty policy document, typically provided with your purchase or available on the Campagnolo website, for full details regarding coverage, duration, and terms.

9.2 Customer Support

For technical assistance, spare parts, or warranty claims, please contact your authorized Campagnolo dealer or visit the official Campagnolo website for support resources and contact information. Always provide your product model name (Bora WTO 45 DB) and part number (WC435BAP8A110) when seeking support.