

SHIMANO BL-M820-B/BR-M820

Shimano Saint BL-M820-B/BR-M820 Disc Brake and Lever Instruction Manual

Model: BL-M820-B/BR-M820

Brand: SHIMANO

1. PRODUCT OVERVIEW

The Shimano Saint BL-M820-B/BR-M820 Disc Brake and Lever system is engineered for high-performance downhill cycling, offering robust stopping power and precise modulation. This hydraulic disc brake system features a shorter Servo Wave arm for improved control and finned metal pads for enhanced heat dissipation. It is designed for front wheel installation and utilizes a post mount caliper.



Figure 1: Main components of the Shimano Saint BL-M820-B/BR-M820 Disc Brake and Lever system, showing the brake lever and the caliper assembly.

2. SPECIFICATIONS

Feature	Detail
Brand	SHIMANO
Model Number	BL-M820-B/BR-M820
Actuation	Hydraulic (Servo-Wave)
Caliper Type	4-piston (dual diameter)

Mount Type	Post Mount
Lever Adjustability	Reach (tool-free), Free Stroke
Pad Type	Finned Metal Pads
Material	Metal
Color	Black/Gold
Item Weight	590 Grams (1.3 pounds)
Product Dimensions	10"L x 10"W
UPC	192790506609

3. SETUP AND INSTALLATION

Proper installation is crucial for optimal performance and safety. It is recommended that installation be performed by a qualified bicycle mechanic.

3.1 Required Tools

- Hex key set (various sizes)
- Torque wrench
- Brake fluid (Shimano Mineral Oil recommended)
- Bleed kit (Shimano specific)
- Clean rags
- Safety glasses and gloves

3.2 Mounting the Caliper

1. Ensure your fork is compatible with post mount calipers.
2. Attach the BR-M820 caliper to the fork's post mount tabs using the provided bolts.
3. Tighten the bolts to the manufacturer's specified torque (refer to your fork's manual for specific torque values).



Figure 2: Close-up view of the BR-M820 caliper, showing its finned design and mounting points. Ensure proper alignment during installation.

3.3 Installing the Brake Lever

1. Slide the BL-M820-B lever onto your handlebar.
2. Position the lever for comfortable reach and ergonomic braking.
3. Tighten the lever clamp bolts securely, but do not overtighten.
4. Connect the brake hose from the caliper to the lever. Ensure a secure, leak-free connection.



Figure 3: The BL-M820-B brake lever, highlighting its ergonomic design and tool-free reach adjustment dial.

3.4 Bleeding the System

After installation, the hydraulic system must be bled to remove any air bubbles. Refer to Shimano's official bleeding procedure for detailed instructions. This typically involves using a bleed funnel at the lever and a bleed nipple at the caliper.

4. OPERATING INSTRUCTIONS

The Shimano Saint brake system is designed for powerful and consistent braking. Familiarize yourself with its operation before riding.

4.1 Brake Lever Adjustment

- **Reach Adjustment:** The BL-M820-B lever features a tool-free reach adjustment dial. Rotate this dial to set the distance of the lever from the handlebar to suit your hand size and preference.
- **Free Stroke Adjustment:** This adjustment allows you to fine-tune the amount of lever travel before the pads engage the rotor. Use a small hex key to adjust the free stroke screw located near the lever pivot.



Figure 4: Detailed view of the brake lever, showing the textured surface for grip and the visible adjustment mechanisms for reach and free stroke.

4.2 Braking Technique

- Apply both front and rear brakes simultaneously for balanced stopping.
- Modulate brake pressure to control speed and maintain traction, especially on loose or wet surfaces.
- Avoid sudden, hard braking unless in an emergency, as this can lead to loss of control.

5. MAINTENANCE

Regular maintenance ensures the longevity and performance of your Shimano Saint brakes.

5.1 Pad Replacement

Brake pads wear down over time and need to be replaced. When the pad material is less than 0.5mm thick, or if braking performance degrades, replace the pads.

1. Remove the wheel from the bike.

2. Remove the pad retaining pin from the caliper.
3. Carefully pull out the old brake pads.
4. Insert new finned metal pads, ensuring they are correctly seated.
5. Reinstall the retaining pin and the wheel.



Figure 5: Close-up of the BR-M820 caliper, highlighting the finned metal brake pads designed for superior heat management.

5.2 Rotor Inspection

Inspect your brake rotors regularly for wear, damage, or contamination. Replace rotors if they are bent, cracked, or worn below their minimum thickness (usually marked on the rotor).

5.3 Fluid Checks and Bleeding

Check brake fluid levels periodically. If the lever feels spongy or braking power is reduced, the system may need to be bled to remove air. Use only genuine Shimano Mineral Oil.

5.4 Cleaning

Keep calipers and rotors clean. Use a clean cloth and isopropyl alcohol to clean rotors. Avoid getting oil or grease on brake components.

6. TROUBLESHOOTING

Problem	Possible Cause	Solution
Spongy Brake Lever	Air in the hydraulic system	Bleed the brake system.
Reduced Braking Power	Worn pads, contaminated pads/rotor, air in system	Replace pads, clean rotor/pads with isopropyl alcohol, bleed system.
Brake Squeal/Noise	Contaminated pads/rotor, misaligned caliper, loose bolts	Clean pads/rotor, realign caliper, check all bolts for tightness.
Brake Dragging	Pistons not retracting, misaligned caliper, overfilled system	Clean pistons, realign caliper, remove excess fluid.

7. WARRANTY AND SUPPORT

For warranty information and technical support, please refer to the official SHIMANO website or contact your authorized SHIMANO dealer. Keep your proof of purchase for any warranty claims.

SHIMANO Official Website: <https://bike.shimano.com/>

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