SHIMANO BL-M820-B(R), BR-M820(R)

Shimano Saint BL-M820-B(R) / BR-M820(R) Hydraulic Disc Brake Set

Instruction Manual

Brand: SHIMANO

1. Introduction and Overview

This manual provides essential information for the proper installation, operation, and maintenance of your Shimano Saint BL-M820-B(R) / BR-M820(R) Hydraulic Disc Brake Set. The Shimano Saint series is engineered for gravity and downhill cycling, offering robust braking performance and advanced heat management.

The set includes a brake lever (BL-M820-B) and a brake caliper (BR-M820), designed to work together for optimal control and stopping power. This specific model is configured for the rear brake (R).

2. Safety Information

Always prioritize safety when installing, operating, or maintaining bicycle components. Improper installation or maintenance can lead to serious injury or death.

- **Professional Installation Recommended:** It is highly recommended that installation and initial setup be performed by a qualified bicycle mechanic.
- **Brake Fluid:** This system uses Shimano genuine mineral oil. Do not use any other type of brake fluid, as it can damage the system and void the warranty.
- **Brake Bedding-In:** New brake pads and rotors require a bedding-in period to achieve full braking power. Follow the bedding-in procedure outlined in the operating section.
- **Regular Inspection:** Inspect your brakes regularly for wear, damage, and proper function. Replace worn components immediately.
- **Genuine Parts:** Use only genuine Shimano replacement parts to ensure compatibility and safety.
- **Riding Conditions:** Braking performance can be affected by weather conditions (rain, snow), terrain, and rider weight. Adjust your riding style accordingly.

3. Package Contents

Verify that all components are present before beginning installation:

- Shimano Saint BL-M820-B Brake Lever (Right)
- Shimano Saint BR-M820 Brake Caliper (Rear)
- Brake hose kit (SM-BH90-SBLS)
- Metal brake pads with cooling fins (H03C)
- Bleeding tool
- Mounting hardware

4. Setup and Installation

This section provides a general overview. For detailed, step-by-step instructions, refer to the official Shimano technical documentation available on the Shimano website or consult a certified Shimano dealer.

4.1. Mounting the Brake Lever (BL-M820-B)

Mount the brake lever onto your handlebar. Ensure the lever is positioned ergonomically for comfortable and effective braking. Tighten the clamp bolts to the manufacturer's specified torque. The BL-M820-B lever features tool-free reach and free stroke adjustments for fine-tuning.



Image: Shimano Saint BL-M820-B(R) brake lever. This image shows the ergonomic design and adjustment points of the lever.

4.2. Mounting the Brake Caliper (BR-M820)

Attach the BR-M820 caliper to your bike's frame using the appropriate post-mount adapter if necessary. Ensure the caliper is aligned correctly over the rotor. The BR-M820 caliper features a 4-ceramic piston design for powerful and consistent braking.



Image: Shimano Saint BR-M820(R) brake caliper with 4-piston design. This image highlights the robust construction and cooling fins of the caliper.

4.3. Connecting the Brake Hose

Route the SM-BH90-SBLS brake hose from the lever to the caliper, ensuring it does not interfere with steering or suspension movement. Connect the hose securely to both the lever and caliper using the provided fittings. Ensure all connections are tight to prevent fluid leaks.

4.4. Bleeding the Brake System

After connecting the hose, the brake system must be bled to remove any air and ensure proper function. The Shimano Saint system features a Simplified Bleeding Process and a One-Way Bleeding System. Use Shimano genuine mineral oil and the provided bleeding tool. Follow the specific bleeding instructions carefully to achieve a firm lever feel.



Image: Shimano Saint BL-M820-B(R) brake caliper and lever assembly. This image displays the complete brake system components.

5. Operating Instructions

5.1. Brake Lever Adjustment

- **Reach Adjustment:** Use the reach adjustment knob on the lever body to set the distance of the lever blade from the handlebar. Adjust it to a position that allows for comfortable and secure finger placement.
- **Free Stroke Adjustment:** The free stroke adjustment allows you to modify the amount of lever travel before the pads engage the rotor. Adjust this to your preference for immediate or more gradual brake engagement.

5.2. Brake Bedding-In Procedure

New brake pads and rotors require a bedding-in process to achieve optimal performance. This process transfers a thin layer of pad material to the rotor, improving friction and reducing noise.

1. Find a safe, open area with no traffic.
2. Accelerate to a moderate speed (e.g., 15-20 mph).
3. Apply the brakes firmly but gradually, without locking the wheels, until your speed is significantly reduced (e.g., 5 mph). Do not come to a complete stop.
4. Repeat this process approximately 20-30 times.
5. Allow the brakes to cool down between sets of applications.
6. After bedding-in, the brakes should offer consistent power and feel.

5.3. Proper Braking Technique

Apply brakes smoothly and progressively. Avoid sudden, hard braking, especially on loose or wet surfaces, to maintain control. Use both front and rear brakes in conjunction for maximum stopping power and stability.

6. Maintenance

Regular maintenance is crucial for the longevity and safe operation of your Shimano Saint disc brakes.

- **Brake Pad Inspection:** Check brake pad wear regularly. Replace pads when the friction material is worn down to 0.5mm or less.
- **Rotor Inspection:** Inspect rotors for wear, damage, or contamination. Replace rotors if they are bent, cracked, or worn below their minimum thickness.

- **Brake Fluid Check and Replacement:** Check the brake fluid level and condition periodically. Shimano recommends replacing mineral oil every 1-2 years, or more frequently with heavy use.
- **Bleeding:** If the lever feels spongy or braking power decreases, the system may need to be bled to remove air. Refer to Shimano's detailed bleeding instructions.
- **Cleaning:** Keep the brake calipers, pads, and rotors clean. Avoid getting oil, grease, or cleaning agents on the brake pads or rotor surfaces, as this can severely impair braking performance. Use specific disc brake cleaner if necessary.
- **Hose Inspection:** Check brake hoses for any signs of damage, kinks, or leaks. Replace damaged hoses immediately.

7. Troubleshooting

If you encounter issues with your brake system, refer to the following common problems and solutions. For complex issues, consult a professional bicycle mechanic.

- **Loss of Braking Power:**
  - *Possible Cause:* Air in the hydraulic system. *Solution:* Bleed the brake system.
  - *Possible Cause:* Worn brake pads. *Solution:* Replace brake pads.
  - *Possible Cause:* Contaminated brake pads or rotor. *Solution:* Clean rotor with disc brake cleaner, replace pads if heavily contaminated.
- **Squealing Noise:**
  - *Possible Cause:* Contaminated brake pads or rotor. *Solution:* Clean rotor, replace pads.
  - *Possible Cause:* Improperly bedded-in pads. *Solution:* Perform bedding-in procedure.
  - *Possible Cause:* Loose caliper or adapter bolts. *Solution:* Check and tighten all mounting bolts to specified torque.
- **Spongy Lever Feel:**
  - *Possible Cause:* Air in the hydraulic system. *Solution:* Bleed the brake system thoroughly.
  - *Possible Cause:* Low brake fluid level. *Solution:* Top up fluid and bleed.
- **Fluid Leakage:**
  - *Possible Cause:* Loose hose connection or damaged seal. *Solution:* Check connections, replace seals or hose if damaged.

8. Specifications

Feature	Detail
Model Numbers	BL-M820-B(R), BR-M820(R)
Brake Type	Hydraulic Disc Brake
Caliper Design	4-Ceramic Piston
Heat Management	Integrated ICE Technologies
Brake Fluid	Shimano Mineral Oil
Pad Type	Metal (H03C) with cooling fins
Bleeding System	One-Way Bleeding, Simplified Bleeding Process

Lever Adjustments	Tool-free Reach Adjust, Free Stroke Adjust
Hose Kit	SM-BH90-SBLS
Caliper Mount	Post Mount
Material (Handle)	Metal
Color	Black
Approx. Item Weight	13.8 ounces (0.86 Pounds)
UPC	192790506593

9. Warranty Information

This Shimano product is covered by a Limited Warranty. For specific terms, conditions, and duration of the warranty, please refer to the official Shimano website or contact your authorized Shimano dealer. Keep your proof of purchase for warranty claims.

10. Support and Contact

For further assistance, technical support, or to locate an authorized service center, please visit the official SHIMANO website or contact your local Shimano dealer. Official Shimano resources provide comprehensive technical documents, videos, and FAQs.

Shimano Official Website: bike.shimano.com

© 2024 SHIMANO. All rights reserved. Information subject to change without notice.

Ask a question about this manual

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. Privacy details.

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question