SHIMANO RD-M310

SHIMANO Altus RD-M310 Rear Derailleur Instruction Manual

Model: RD-M310 | Brand: SHIMANO

1. Introduction

This manual provides essential information for the proper installation, operation, and maintenance of your SHIMANO Altus RD-M310 rear derailleur. Please read these instructions carefully before use to ensure optimal performance and safety. The SHIMANO Altus RD-M310 is designed for 7-speed and 8-speed bicycle drivetrains, offering reliable and smooth gear changes.

2. Safety Information

Always wear appropriate safety gear when working on your bicycle. Ensure all components are securely fastened and correctly adjusted before riding. Improper installation or adjustment can lead to serious injury or damage to the bicycle. For detailed safety guidelines, refer to the official SHIMANO safety documentation available online or consult a professional bicycle mechanic.
A safety information PDF document is available for download: Safety Information (PDF)

3. Product Overview

The SHIMANO Altus RD-M310 is a durable rear derailleur constructed from metal, primarily aluminum alloy, designed for direct mount applications. It features a long cage (SGS) suitable for a wide range of gear ratios, supporting up to 43 teeth on the largest rear sprocket.



Image 3.1: The SHIMANO Altus RD-M310 rear derailleur, shown in black. This component is crucial for shifting gears on your bicycle's rear cassette.

Components Included:

- One (1) SHIMANO Altus RD-M310 Rear Derailleur

4. Setup and Installation

Proper installation is key to the derailleur's performance. If you are unsure about any step, it is recommended to seek assistance from a qualified bicycle mechanic.

4.1 Mounting the Derailleur

1. Ensure your bike frame has a direct mount hanger compatible with the RD-M310.
2. Thread the derailleur onto the hanger by hand, then tighten the mounting bolt to the manufacturer's specified torque.

4.2 Connecting the Shift Cable

1. Route the shift cable through the cable housing and guide it to the derailleur's cable fixing bolt.
2. Pull the cable taut, then secure it with the cable fixing bolt. Do not overtighten.

4.3 Limit Screw Adjustment (H and L)

The H (High) and L (Low) limit screws prevent the chain from shifting beyond the smallest and largest cogs, respectively.



Image 4.1: A detailed view of a bicycle chain engaging with a gear cassette, illustrating the area where the derailleur guides the chain.

1. **H-Screw (High Limit):** Shift the chain to the smallest rear cog. Adjust the H-screw so that the upper guide pulley is directly aligned with the center of the smallest cog. The chain should run smoothly without rubbing.
2. **L-Screw (Low Limit):** Shift the chain to the largest rear cog. Adjust the L-screw so that the upper guide pulley is directly aligned with the center of the largest cog. This prevents the chain from going into the spokes.

4.4 B-Tension Screw Adjustment

The B-tension screw adjusts the distance between the upper guide pulley and the cogs. This is crucial for smooth shifting across all gears.

1. Shift the chain to the largest rear cog and the smallest front chainring.
2. Adjust the B-tension screw (located on the derailleur body) so that there is a small gap (approximately 5-6mm) between the upper guide pulley and the largest cog. This ensures optimal chain wrap and shifting performance.

4.5 Fine-Tuning

After initial adjustments, fine-tune shifting using the barrel adjuster on the shift lever or derailleur. Turn clockwise to move the derailleur inward (towards larger cogs) and counter-clockwise to move it outward (towards smaller cogs) until shifting is crisp and precise.

5. Operating the Derailleur

The SHIMANO Altus RD-M310 is operated via a compatible shift lever. To change gears, actuate the shift lever according to its specific instructions. Shift smoothly and avoid excessive force. For optimal performance, it is recommended to ease off pedaling pressure slightly during a shift.
This derailleur is designed for 7-speed or 8-speed cassettes. Ensure your shifters and cassette are compatible with this derailleur for proper function.

6. Maintenance

Regular maintenance extends the life and performance of your derailleur.

6.1 Cleaning

- Periodically clean the derailleur, especially the pulleys and cage, to remove dirt and grime. Use a degreaser and a brush, then rinse with water and dry thoroughly.

6.2 Lubrication

- After cleaning, apply a light bicycle-specific lubricant to the pivot points of the derailleur and the pulley bearings. Avoid over-lubrication, which can attract dirt.

6.3 Cable and Housing

- Inspect the shift cable and housing regularly for fraying, kinks, or corrosion. Worn cables and housing can significantly degrade shifting performance. Replace them as needed for smooth and precise gear changes.

7. Troubleshooting

If you experience issues with your derailleur, consider the following common problems and solutions:

- **Poor Shifting / Gears Skipping:**
  - Check cable tension using the barrel adjuster.
  - Verify H and L limit screw settings.
  - Inspect the derailleur hanger for bends or damage. A bent hanger is a common cause of poor shifting.
  - Ensure the chain and cassette are clean and not excessively worn.
  - Check for worn or damaged shift cable and housing.
- **Chain Rubbing / Noise:**
  - Adjust cable tension with the barrel adjuster.
  - Re-check H and L limit screws.
  - Ensure the B-tension screw is correctly set to maintain proper clearance between the pulley and cogs.
- **Derailleur Not Moving:**
  - Check if the shift cable is properly connected and not broken.
  - Ensure the derailleur is not seized due to dirt or corrosion. Clean and lubricate if necessary.

If problems persist after attempting these solutions, consult a professional bicycle mechanic.

8. Specifications

Brand	SHIMANO
Model Number	RD-M310 (Part Number: RDM310DL)
Series	Altus
Speed Compatibility	7-speed, 8-speed
Cage Length	SGS (Long Cage)
Color	Black

Material	Metal, Aluminum Alloy
Mounting Type	Direct Mount
Max. Rear Sprocket	43 Teeth
Product Dimensions (L x W x H)	22.5 x 15.8 x 10.3 cm
Country of Origin	Japan

9. Warranty and Support

9.1 Manufacturer's Warranty

This SHIMANO Altus RD-M310 rear derailleur comes with a **2-year manufacturer's warranty**. This warranty covers defects in materials and workmanship under normal use. Please retain your proof of purchase for warranty claims.

9.2 Customer Support

For technical assistance, spare parts, or warranty inquiries, please contact your local SHIMANO dealer or visit the official SHIMANO website for support resources and contact information.

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

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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