**SHIMANO RD-RX822-SGS**

# SHIMANO GRX RD-RX822-SGS Rear Derailleur User Manual

Model: RD-RX822-SGS

## 1. Introduction

This manual provides essential information for the proper installation, operation, and maintenance of your SHIMANO GRX RD-RX822-SGS 1x12V Rear Derailleur. Please read this manual thoroughly before use to ensure safe and correct handling of the product. Retain this manual for future reference.
The SHIMANO GRX RD-RX822-SGS is designed for 1x12V gravel and off-road cycling systems, supporting a maximum cassette sprocket of 51 teeth.

## 2. Safety Information

Always observe the following safety precautions to prevent personal injury and damage to the product or bicycle.

- Ensure all components are securely fastened according to torque specifications. Loose components can cause accidents.
- Regularly inspect the derailleur for any signs of damage, wear, or loose connections.
- Keep hands and clothing clear of moving parts, especially the chain and derailleur pulleys, during operation.
- Use only genuine SHIMANO parts and recommended tools for installation and maintenance.
- If you are unsure about any installation or adjustment procedure, consult a professional bicycle mechanic.

## 3. Package Contents

Verify that all items are present in the package:

- SHIMANO GRX RD-RX822-SGS Rear Derailleur
- Instruction Manual (this document)
- (Additional small parts like B-tension screw, cable fixing bolt, etc., may be pre-installed or included separately depending on packaging.)




Figure 3.1: Front view of the SHIMANO GRX RD-RX822-SGS Rear Derailleur. This image shows the main body of the derailleur, the GRX branding, and the pulley cage.

## 4. Setup and Installation

Proper installation is crucial for optimal performance and safety. Refer to the detailed technical service instructions available on the official SHIMANO website for comprehensive guidance.

### 4.1 Tools Required

- Hex wrenches (typically 5mm)
- Cable cutters
- Torque wrench (recommended for precise installation)

### 4.2 Mounting the Derailleur

1. Ensure your bicycle frame has a compatible derailleur hanger.
2. Apply a small amount of grease to the derailleur hanger threads.
3. Thread the derailleur into the hanger. Tighten to the specified torque (refer to SHIMANO technical documentation, typically 8-10 Nm).

### 4.3 Cable Routing and Adjustment

1. Route the shift cable through the frame and derailleur cable guide.
2. Secure the cable with the cable fixing bolt. Do not overtighten.
3. Adjust the high (H) and low (L) limit screws to prevent the chain from overshifting off the smallest or largest cog.
4. Adjust the B-tension screw to optimize the distance between the upper guide pulley and the cassette cogs. This is critical for smooth shifting across the entire cassette, especially with a 51T maximum cog.
5. Fine-tune shifting using the barrel adjuster on the shifter or derailleur.




Figure 4.1: Angled view of the SHIMANO GRX RD-RX822-SGS Rear Derailleur, highlighting the pulley cage and adjustment points. This view provides a better perspective of the derailleur's profile and its components.

## 5. Operating the Derailleur

The SHIMANO GRX RD-RX822-SGS derailleur operates in conjunction with a compatible 1x12V SHIMANO GRX shifter and cassette.

- **Shifting Up (to larger cogs):** Push the main lever of your shifter to move the chain to a larger, easier-to-pedal cog.
- **Shifting Down (to smaller cogs):** Push the release lever of your shifter to move the chain to a smaller, harder-to-pedal cog.
- **Smooth Shifting:** Always pedal forward while shifting. Avoid shifting under heavy load to prolong the life of your drivetrain components.

## 6. Maintenance

Regular maintenance ensures optimal performance and extends the lifespan of your derailleur.

### 6.1 Cleaning

- After each ride, especially in dirty or wet conditions, clean the derailleur and pulleys with a brush and mild degreaser.
- Rinse thoroughly with water and dry completely.

### 6.2 Lubrication

- Lubricate the chain regularly with appropriate chain lubricant.
- Apply a small amount of light oil to the pivot points of the derailleur body and pulley cage periodically.

### 6.3 Inspection

- Check for bent derailleur hanger or cage. A bent hanger can cause poor shifting.
- Inspect pulley wheels for wear. Worn pulleys can lead to noisy or inefficient shifting. Replace if necessary.
- Ensure all bolts are tightened to their specified torque values.

## 7. Troubleshooting

| Problem | Possible Cause | Solution |
|---|---|---|
| Poor or slow shifting | Cable tension incorrect, bent derailleur hanger, worn cable/housing, dirty drivetrain. | Adjust barrel adjuster, check/replace hanger, replace cable/housing, clean and lubricate drivetrain. |
| Chain rubbing on derailleur cage | Limit screws incorrectly set, B-tension incorrect. | Adjust H/L limit screws, adjust B-tension screw. |
| Noisy operation | Lack of lubrication, worn pulleys, dirty components. | Lubricate, replace pulleys, clean components. |

## 8. Specifications

| Feature | Specification |
|---|---|
| Model Number | RD-RX822-SGS |
| Series | GRX 12-speed |

| Feature | Specification |
|---|---|
| Compatible Drivetrain | 1x12-speed |
| Max. Low Sprocket | 51T |
| Min. Low Sprocket | 45T |
| Max. High Sprocket | 11T |
| Min. High Sprocket | 10T |
| Total Capacity | 41T |
| Cage Length | SGS (Long Cage) |
| Weight | Approximately 300g (10.6 ounces) |
| Material | Aluminum |

## 9. Warranty and Support

SHIMANO products are covered by a limited warranty against defects in materials and workmanship. For specific warranty terms and conditions, please refer to the official SHIMANO website or contact your local SHIMANO distributor. For technical support, spare parts, or further assistance, please visit the official SHIMANO website or contact your authorized SHIMANO dealer.

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