

SHIMANO RD-M8100-SGS, RD-M8120-SGS

SHIMANO XT RD-M8100-SGS / RD-M8120-SGS 12-Speed Rear Derailleur Instruction Manual

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1. INTRODUCTION

This manual provides essential information for the proper setup, operation, and maintenance of your SHIMANO XT RD-M8100-SGS or RD-M8120-SGS 12-Speed Rear Derailleur. Designed for mountain biking, this component delivers precise and stable shifting performance across various terrains. Please read this manual thoroughly before use to ensure optimal performance and safety.

2. KEY FEATURES

- **Optimized Shifting Performance:** Provides high-speed and precise shifting performance, optimized for diverse trail conditions.
- **Quiet Drivetrain:** Ensures a quiet drivetrain in any gear position, enhancing the riding experience.
- **Stable Drivetrain:** Maintains stable drivetrain performance even on undulating and challenging terrain.
- **New Bumper Design:** Features a new bumper integrated into the pulley cage to improve drivetrain silence and reduce chain slap.
- **Low Profile Design:** Reduces the risk of damage from trail obstacles.
- **Large 13T Pulleys:** Incorporates large 13-tooth pulleys to increase efficiency and improve chain retention.
- **12-Speed Compatibility:** Fully compatible with 12-speed drivetrains, designed for front single chainring setups.
- **Fast, Shockless Shifting:** Delivers quick and smooth gear changes.

3. SETUP & INSTALLATION

Proper installation is crucial for the performance and longevity of your derailleur. It is highly recommended that installation be performed by a qualified bicycle mechanic. Always refer to the official SHIMANO dealer manuals or technical service instructions for detailed, step-by-step installation procedures.

3.1. General Installation Steps (Overview):

1. **Mounting:** Securely attach the rear derailleur to the bicycle's derailleur hanger.
2. **Cable Routing:** Route the shift cable correctly through the frame and connect it to the derailleur.
3. **Limit Screw Adjustment:** Adjust the high (H) and low (L) limit screws to prevent the chain from overshifting off the smallest and largest cogs.
4. **B-Tension Adjustment:** Adjust the B-tension screw to optimize the distance between the upper guide pulley and the cassette cogs.
5. **Indexing:** Fine-tune the cable tension for precise gear changes across all 12 speeds.



Figure 1: SHIMANO XT RD-M8100-SGS 12-Speed Rear Derailleur. This image shows the overall design of the derailleur, highlighting its compact and robust construction.

- MTBコンポ「DEORE XT」シリーズの12スピード・シャドーリアディレーラープラス。
- どんなトレイルにも対応する最適化された高速かつ精密なシフティング性能。
- どんなギアポジションでも静かなドライブトレイン。
- 起伏の多い地形でも安定したドライブトレイン。
- ブーリーケースに追加された新型バンパー。
- ロープロファイル デザイン。
- 13T大型ブーリー採用。
- フロントシングル、12スピード対応。

- リア対応スピード：12スピード
- シフトタイプ：メカニカル
- 対応チェーン：HG 12-speed
- 対応ロー sprocket（最小/最大）：45/51T
- 対応トップ sprocket（最小/最大）：10/10T
- トータルキャパシティ：41T
- 最大フロント歯数差：0T
- 平均重量：284g

Figure 2: Detailed view of the SHIMANO XT RD-M8100-SGS Rear Derailleur. This image provides a closer look at the pulley cage and the 13T pulleys, which are key to its efficient operation.

4. OPERATION

The SHIMANO XT RD-M8100-SGS / RD-M8120-SGS derailleur operates mechanically, providing crisp and reliable gear changes. To shift gears, use your compatible 12-speed shifter to move the chain across the cassette cogs. Push the lever to shift to a larger cog (easier gear) and release/push the other lever to shift to a smaller cog (harder gear).

- **Smooth Shifting:** Always ease off the pedal pressure slightly when shifting to allow the chain to move smoothly between cogs.
- **Anticipate Shifts:** Shift gears proactively before encountering steep climbs or descents to maintain momentum and control.

5. MAINTENANCE

Regular maintenance will extend the life of your derailleur and ensure consistent performance.

5.1. Cleaning:

- Clean the derailleur, chain, and cassette regularly with a suitable bicycle degreaser and brush. Rinse thoroughly with water and dry.

5.2. Lubrication:

- After cleaning, apply a high-quality bicycle chain lubricant to the chain. Lubricate the derailleur's pivot points sparingly.

5.3. Inspection:

- Periodically inspect the derailleur for any signs of damage, bending, or excessive wear, especially on the pulley wheels.
- Check the shift cable for fraying or corrosion. Replace if necessary.

- Ensure the derailleur hanger is straight and not bent. A bent hanger can cause poor shifting.

6. TROUBLESHOOTING

If you encounter issues with your derailleur, consider the following common troubleshooting steps:

- **Poor Shifting / Skipping Gears:**

- Check shift cable tension. Adjust using the barrel adjuster on the shifter or derailleur.
- Verify limit screw settings. Incorrect settings can prevent full range of motion or cause overshifting.
- Inspect the derailleur hanger for bends. A bent hanger is a common cause of poor shifting.
- Ensure the chain and cassette are clean and properly lubricated.

- **Excessive Noise:**

- Check B-tension adjustment. Incorrect B-tension can cause the upper pulley to rub against the cassette.
- Ensure the chain is not too long or too short.
- Verify that the chain is not rubbing against the derailleur cage.

For more complex issues, consult a professional bicycle mechanic or refer to the comprehensive technical documentation available on the official SHIMANO website.

7. SPECIFICATIONS

Attribute	Detail
Model Numbers	RD-M8100-SGS, RD-M8120-SGS
Rear Compatible Speed	12-speed
Shift Type	Mechanical
Compatible Chain	HG 12-speed
Low Sprocket (Min/Max)	45T / 51T
Top Sprocket (Min/Max)	10T / 10T
Total Capacity	41T
Maximum Front Tooth Difference	0T (for 1x systems)
Average Weight	284g
Material	Aluminum
Product Dimensions (LxWxH)	7" x 7" x 5"
Manufacturer Model Name	587830
UPC	192790443645

8. WARRANTY & SUPPORT

This SHIMANO product is covered by a **90-day limited warranty** from the date of purchase. This warranty covers defects in materials and workmanship under normal use.

8.1. Warranty Claims:

For warranty claims, please retain your proof of purchase and contact the authorized SHIMANO dealer from whom you purchased the product. They will guide you through the warranty process.

8.2. Technical Support:

For technical assistance, detailed product information, or to access the latest technical service instructions and manuals, please visit the official SHIMANO website or contact your local SHIMANO distributor.

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