

## SHIMANO HB-RM33

# SHIMANO HB-RM33 Hub Axle Assembly (Y28W98010) Instruction Manual

Model: HB-RM33 | Part Number: Y28W98010

## 1. INTRODUCTION

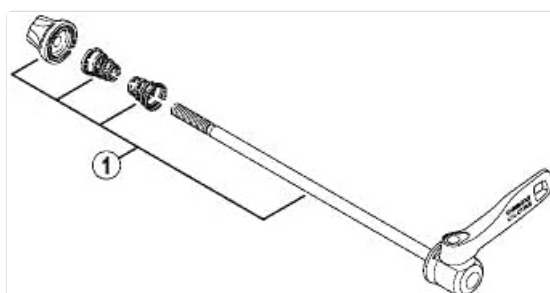
This instruction manual provides essential information for the proper installation, operation, and maintenance of your SHIMANO HB-RM33 Hub Axle Assembly, Part Number Y28W98010. This component is designed as a replacement or service part for compatible SHIMANO HB-RM33 bicycle hubs. Please read this manual thoroughly before attempting any installation or maintenance to ensure safe and correct usage.

### **Safety Warning:**

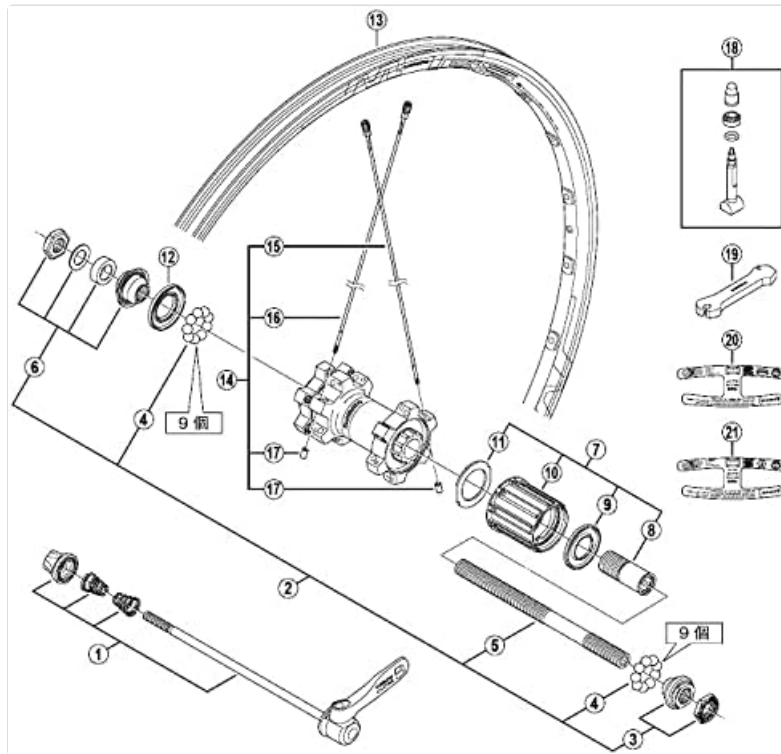
- Always wear appropriate safety gear, including eye protection, when working on bicycle components.
- If you are unsure about any part of the installation or maintenance process, consult a professional bicycle mechanic.
- Incorrect installation or adjustment can lead to serious injury or damage to your bicycle.

## 2. PRODUCT OVERVIEW

The SHIMANO HB-RM33 Hub Axle Assembly (Y28W98010) includes the axle, cones, locknuts, and quick-release skewer components necessary for servicing or replacing the axle system of a compatible HB-RM33 front hub. This assembly ensures smooth wheel rotation and secure attachment to your bicycle frame.



**Figure 2.1:** Exploded view of the quick release skewer components. This image shows the individual parts of the quick release skewer, including the skewer rod, springs, and end nuts, which are used to secure the wheel to the bicycle frame.



**Figure 2.2:** Exploded diagram of the SHIMANO HB-RM33 hub assembly. This detailed diagram illustrates all internal and external components of the hub, including the axle, bearings, cones, locknuts, and the quick release skewer, providing a comprehensive view for assembly and maintenance.

### 3. SETUP AND INSTALLATION

This section outlines the general procedure for installing the hub axle assembly. Refer to Figure 2.2 for component identification.

1. **Disassembly of Old Hub:** Carefully remove the existing quick release skewer, then use appropriate cone wrenches to loosen and remove the locknuts and cones from the old axle. Remove the axle and bearings.
2. **Cleaning:** Thoroughly clean the hub shell and bearing races. Inspect for any damage or wear.
3. **Greasing:** Apply a generous amount of high-quality bicycle grease to the bearing races inside the hub shell and to the new bearings.
4. **Bearing Placement:** Place the appropriate number of bearings into each side of the hub shell.
5. **Axle Assembly:**
  - Thread one cone and locknut onto one end of the new axle (Part 5 in Figure 2.2). Ensure the cone faces the bearings.
  - Insert the axle through the hub shell, ensuring the bearings remain in place.
  - Thread the second cone and locknut onto the other end of the axle.
6. **Cone Adjustment:** This is a critical step.
  - Tighten the cones until there is no play in the axle, but the wheel still spins freely.
  - Hold one cone stationary with a cone wrench and tighten the opposing locknut against it firmly.
  - Check for play and smooth rotation. Adjust as necessary. There should be no side-to-side play, and the axle should spin smoothly without binding.

7. **Quick Release Skewer Installation:** Assemble the quick release skewer (Part 1 in Figure 2.2) by placing the springs with the narrow end facing inwards onto the skewer rod, followed by the end nuts. Insert the assembled skewer through the hub axle.
8. **Wheel Installation:** Install the wheel onto your bicycle frame, ensuring the quick release skewer is properly closed and secured.

**Important: Overtightening cones will cause premature bearing wear and rough rotation. Undertightening will result in play and potential damage to the hub.**

## 4. OPERATION

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Once installed, the HB-RM33 hub axle assembly requires minimal operational attention beyond ensuring proper quick-release function and periodic checks.

- **Quick Release Check:** Before each ride, ensure the quick release lever is fully closed and provides adequate clamping force to secure the wheel firmly in the dropouts. The lever should require a firm push to close, leaving an imprint on your palm.
- **Smooth Rotation:** The wheel should spin freely and smoothly without any grinding noises or excessive resistance.
- **No Play:** There should be no side-to-side play when you attempt to wiggle the wheel in the frame.

## 5. MAINTENANCE

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Regular maintenance will extend the life and performance of your hub axle assembly.

- **Periodic Inspection (Every 3-6 months or 500-1000 km):**
  - Check for any play in the hub bearings by wiggling the wheel side-to-side.
  - Spin the wheel to check for smooth rotation and any grinding sounds.
  - Inspect the quick release skewer for damage or bending.
- **Bearing Service (Annually or as needed):**
  - Disassemble the hub as described in the "Setup and Installation" section.
  - Clean all components, especially the bearings, cones, and races, with a degreaser.
  - Inspect bearings, cones, and races for pitting, wear, or corrosion. Replace any damaged parts.
  - Repack with fresh, high-quality bicycle grease and reassemble, carefully adjusting the cones as described previously.
- **Quick Release Lubrication:** Apply a light coat of grease to the quick release skewer rod periodically to ensure smooth operation.

## 6. TROUBLESHOOTING

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Problem	Possible Cause	Solution
Wheel has side-to-side play	Loose cone adjustment; worn bearings	Adjust cones (see Section 3); inspect and replace bearings if worn.

Problem	Possible Cause	Solution
Wheel does not spin freely / feels rough	Overtightened cones; insufficient grease; damaged bearings/races	Loosen and readjust cones; clean and regrease bearings; replace damaged components.
Quick release lever does not secure wheel	Quick release skewer not adjusted correctly; damaged skewer	Adjust the quick release nut for proper clamping force; inspect skewer for damage and replace if necessary.

## 7. SPECIFICATIONS

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- **Part Number:** Y28W98010
- **Compatible Model:** SHIMANO HB-RM33 Hub
- **Target Gender:** Unisex
- **Package Dimensions:** 5 x 5 x 5 cm
- **Package Weight:** 500 g
- **ASIN:** B00NEZSW0S
- **First Available Date:** November 5, 2015

## 8. WARRANTY AND SUPPORT

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For warranty information and technical support regarding your SHIMANO HB-RM33 Hub Axle Assembly (Y28W98010), please refer to the official SHIMANO website or contact your authorized SHIMANO dealer. Keep your proof of purchase for warranty claims.

**SHIMANO Official Website:** [bike.shimano.com](https://bike.shimano.com)