SHIMANO Y49398060

Shimano WH-6800-R Freehub Body Instruction Manual

Part Number: Y49398060

Introduction

This manual provides essential information for the proper installation, operation, and maintenance of your Shimano WH-6800-R Complete Freewheel Body. Designed for durability and seamless compatibility, this freehub body is a critical component for smooth power transfer and consistent engagement in your bicycle's drivetrain. Adhering to these instructions will help ensure optimal performance and longevity of the product.

Product Overview

The Shimano WH-6800-R Freehub Body is engineered for specific Shimano hub models, including FH-6800, FH-CX75, and WH-6800 series hubs. It is compatible with Shimano HG 11/12-speed road cassette systems, providing precise gear shifting and efficient power transfer. Constructed from steel, it offers strength and resilience against wear and corrosion, suitable for demanding cycling conditions such as cyclocross and road cycling.



Image 1: The Shimano WH-6800-R Freehub Body. This image displays the complete freehub body, a cylindrical component with splines for cassette attachment and an internal mechanism for engagement with the hub shell. It is black in color and made of steel.

Key Features:

- **Durable Steel Construction:** Ensures long-lasting performance and resistance to wear.
- **Wide Compatibility:** Designed for FH-6800, FH-CX75, and WH-6800 hubs.
- **Enhanced Sealing:** Integrated seal protects internal components from dirt, mud, and water.
- **HG 11/12-Speed Support:** Engineered for Shimano HG 11/12-speed road cassette systems.
- **Complete Replacement Kit:** Includes the freehub body, secure bolt, and washer for installation.

INSTALLATION

Proper installation of the freehub body is crucial for safe and efficient operation. If you are unsure about any step, it is recommended to seek assistance from a qualified bicycle mechanic.

Required Tools:

- Appropriate cone wrenches (if applicable to your hub model)
- Hex key (typically 10mm or 12mm for the freehub bolt)
- Cassette lockring tool and chain whip (for cassette removal)
- Grease
- Clean rags

Installation Steps:

1. **Remove Wheel and Cassette:** Remove the rear wheel from the bicycle. Use a chain whip and cassette lockring tool to remove the cassette from the existing freehub body.
2. **Disassemble Hub (if necessary):** Depending on your hub model, you may need to remove the axle, cones, and locknuts to access the freehub body bolt. Consult your hub's specific service manual for detailed disassembly instructions.
3. **Remove Old Freehub Body:** Locate the freehub body bolt, typically found inside the hub shell or accessible from the non-drive side. Use the appropriate hex key to unthread and remove the bolt. Carefully slide the old freehub body off the hub shell.
4. **Clean Hub Shell:** Thoroughly clean the hub shell and any remaining internal components to remove old grease, dirt, and debris.
5. **Install New Freehub Body:** Apply a thin layer of grease to the threads of the new freehub body bolt and the mating surface where the freehub body meets the hub shell. Slide the new Shimano WH-6800-R freehub body onto the hub shell, ensuring the pawls engage correctly.
6. **Secure Freehub Body:** Insert the freehub body bolt and tighten it to the manufacturer's specified torque. Refer to your hub's service manual for the correct torque value. Overtightening or undertightening can lead to damage or premature wear.
7. **Reassemble Hub and Cassette:** Reassemble the hub components (axle, cones, locknuts) if they were removed, adjusting them to eliminate play without causing binding. Install the cassette onto the new freehub body and tighten the lockring to the specified torque.
8. **Test Functionality:** Reinstall the wheel on the bicycle and test the drivetrain for smooth shifting and proper freehub engagement.

Operation

The freehub body is an integral part of your bicycle's rear wheel, allowing the cassette to rotate independently of the wheel when you stop pedaling (coasting) and to engage the wheel when you pedal forward. The internal pawl mechanism ensures instant engagement for efficient power transfer from your pedals to the rear wheel.
When pedaling forward, the pawls inside the freehub body engage with the ratchet ring in the hub shell, transferring power to the wheel. When you stop pedaling, the pawls disengage, allowing the cassette and chain to remain stationary while the wheel continues to spin freely.

Maintenance

Regular maintenance helps prolong the life and ensure the smooth operation of your freehub body.

- **Cleaning:** Periodically clean the exterior of the freehub body and cassette to remove dirt, grime, and old lubricant. Use a degreaser specifically designed for bicycle components.
- **Lubrication:** While the internal mechanism of the freehub body is sealed, if you experience any issues with engagement or excessive noise, it may indicate a need for internal service. This typically requires specialized tools and knowledge; consult a professional mechanic. Avoid over-lubricating the pawls, as this can cause them to stick.
- **Inspection:** Regularly inspect the freehub body for any signs of wear, damage, or play. Check the cassette for tight fitment and ensure the lockring is properly torqued.
- **Seal Integrity:** The integrated seal helps protect against contaminants. If you notice any damage to the seal, it should be addressed to prevent water and dirt ingress.

Troubleshooting

Here are some common issues and potential solutions related to freehub bodies:

- **Freehub Not Engaging / Slipping:**
  - **Cause:** Worn pawls or ratchet ring, insufficient or incorrect lubrication, debris inside the freehub.
  - **Solution:** Disassemble, clean, inspect for wear, and re-lubricate with appropriate freehub grease. If components are worn, replacement is necessary.
- **Excessive Noise (Clicking/Grinding):**
  - **Cause:** Lack of lubrication, contamination, worn bearings (if applicable to your hub), or loose components.
  - **Solution:** Clean and re-lubricate. Check for proper assembly and torque of all components.
- **Cassette Play / Wobble:**
  - **Cause:** Loose cassette lockring, worn freehub body splines, or incorrect spacers.
  - **Solution:** Ensure cassette lockring is tightened to specification. Inspect freehub body splines for damage. Verify correct spacers are used for your cassette.
- **Wheel Drag / Resistance:**
  - **Cause:** Overtightened freehub bolt, contaminated or damaged bearings, or incorrect assembly.
  - **Solution:** Check freehub bolt torque. Inspect and service bearings if necessary. Ensure all components are assembled correctly.

For complex issues or if you are unsure about performing repairs, consult a professional bicycle mechanic.

Specifications

Brand Name	SHIMANO
Model Name	Freehub Bodies
Part Number	Y49398060
Material	Steel
Color	Silver
Item Weight	4.48 ounces
Item Dimensions (LxWxH)	3.25 x 2.25 x 1.5 inches
Compatibility	FH-6800, FH-CX75, WH-6800 hubs; HG 11/12-speed road cassette systems
Included Components	Freehub Body

Warranty and Support

This Shimano product comes with a Limited Warranty. For specific details regarding warranty coverage, terms, and conditions, please refer to the official Shimano warranty documentation provided with your purchase or visit the official Shimano website.
For additional support, technical inquiries, or to find authorized service centers, please visit the officialSHIMANO Store or their corporate website.