



Manuals.plus /

› SHIMANO /

› SHIMANO Deore XT FH-M770-S Hub Axle Instruction Manual

## SHIMANO FH-M770-S

# SHIMANO Deore XT FH-M770-S Hub Axle Instruction Manual

Model: FH-M770-S (Part Number: Y3CZ98010)

## 1. Product Overview

The SHIMANO FH-M770-S Complete Hub Axle is a component designed for rear bicycle wheels. It is suitable for bike maintenance, service, and repair, contributing to wheel alignment and smooth function. Constructed from corrosion-resistant steel, this axle set offers strength and longevity. It is precision-machined for a proper fit, providing stability for various riding conditions. The FH-M770-S axle set is compatible with SHIMANO FH-M770 series hubs, ensuring a secure connection between the hub and the bicycle frame. Its 168mm length is designed for compatibility with a range of bike frames, supporting a responsive ride. The design aims to minimize play and enhance wheel stability. This complete axle assembly includes necessary components for installation and maintenance. Its design reduces wear, extending the lifespan of the wheel system. It supports quick wheel removal and installation.



Image 1: SHIMANO Deore XT FH-M770-S Complete Hub Axle. This image displays the full axle assembly, including the axle shaft, cones, and locknuts.

### Key Features:

- Compatible with FH-M770-S hubs for precise fit.
- Constructed from durable, corrosion-resistant materials.
- Engineered for stiffness, strength, and smooth wheel operation.
- Suitable for repairs or upgrades, integrating with MTB wheelsets.
- Features a 168mm length for versatile compatibility in mountain biking and trail applications.

## 2. Package Contents

Verify that all components are present in the package:

- 1 x Axle Set (Complete Hub Axle Assembly)

## 3. Setup and Installation

This section provides general guidance for installing the SHIMANO FH-M770-S Hub Axle. Professional installation by a qualified bicycle mechanic is recommended.

### Required Tools:

- Cone wrenches (typically 13mm, 15mm, 17mm)
- Adjustable wrench or appropriate sized open-end wrench
- Grease
- Clean rags

### Installation Steps:

1. **Remove the Wheel:** Carefully remove the rear wheel from the bicycle frame.
2. **Disassemble Old Axle (if replacing):** If replacing an existing axle, use cone wrenches to loosen the locknuts and cones. Remove the old axle, bearings, and seals. Note the order of components for reassembly.
3. **Clean Hub Shell:** Thoroughly clean the inside of the hub shell and bearing races. Inspect for any damage or wear.
4. **Grease and Install Bearings:** Apply a thin layer of bicycle grease to the bearing races. Carefully place new or cleaned bearings into the hub.
5. **Assemble New Axle:** Slide the new FH-M770-S axle through the hub shell. On one side, thread on a cone and locknut. Adjust the cone until it just contacts the bearings, then tighten the locknut against the cone using two cone wrenches to prevent the cone from moving.
6. **Adjust Cone Play:** On the other side, thread on the remaining cone and locknut. Adjust this cone until there is no play in the axle, but the wheel still spins freely. This is a critical step; too tight will damage bearings, too loose will cause premature wear.
7. **Final Tightening:** Once the correct adjustment is achieved, tighten the outer locknut against the cone firmly using two cone wrenches. Double-check for play and free rotation.
8. **Reinstall Wheel:** Reinstall the wheel onto the bicycle frame, ensuring it is properly seated in the dropouts and the quick release or axle nuts are securely tightened.



Image 2: SHIMANO FH-M770-S Hub Axle components. This image shows the axle, cones, and locknuts, illustrating the individual parts of the assembly.

## 4. Operating Guidelines

The SHIMANO FH-M770-S Hub Axle is designed to provide a stable and reliable connection for your bicycle's rear wheel. Once properly installed and adjusted, it ensures the wheel spins smoothly and maintains alignment within the frame. No specific operational steps are required beyond regular cycling. The axle's function is integral to the wheel's performance, contributing to overall ride stability and power transfer.

## 5. Maintenance

Regular maintenance of your hub axle system is crucial for longevity and performance.

- **Periodic Inspection:** Regularly check the rear wheel for any side-to-side play. If play is detected, the cones may need adjustment.

- **Cleaning:** Keep the hub area clean from dirt, mud, and debris. A clean hub prevents contaminants from entering the bearings.
- **Regreasing:** Depending on riding conditions and frequency, the hub bearings should be disassembled, cleaned, and regreased annually or bi-annually. This prevents corrosion and ensures smooth operation.
- **Component Check:** Inspect cones, locknuts, and the axle shaft for any signs of wear, pitting, or damage. Replace worn components as necessary.
- **Torque Check:** Ensure quick release skewers or axle nuts are tightened to the manufacturer's recommended torque specifications to secure the wheel properly.

## 6. Troubleshooting

Problem	Possible Cause	Solution
Wheel has side-to-side play	Loose cone adjustment	Adjust cones to remove play while allowing free rotation.
Wheel does not spin freely / feels stiff	Cones are too tight; bearings are dry or damaged	Loosen cones slightly; clean and regrease bearings, replace if damaged.
Clicking or grinding noise from hub	Damaged bearings or cones; insufficient grease	Disassemble, inspect, clean, regrease, and replace damaged components.
Axle bent or broken	Impact or excessive stress	Replace the complete hub axle assembly.

## 7. Specifications

Specification	Detail
Brand	SHIMANO
Model Number	FH-M770-S (Y3CZ98010)
Compatibility	SHIMANO FH-M770 series hubs
Axle Length	168mm
Material	Corrosion-resistant steel
Item Weight	0.24 Pounds
Included Components	Axle Set
UPC	689228220478
ASIN	B016MPLGW2

## 8. Warranty and Support

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This SHIMANO product comes with a Limited Warranty. For specific terms and conditions, please refer to the official SHIMANO warranty documentation provided with your purchase or visit the official SHIMANO website. For technical support, installation assistance, or warranty claims, please contact your authorized SHIMANO dealer or visit the official SHIMANO support portal. Ensure you have your product model number (FH-M770-S) and proof of purchase available when seeking support.