

## SHIMANO FC-M615

# Shimano Deore FC-M615 38T Chainring Instruction Manual

Model: FC-M615

## 1. PRODUCT OVERVIEW

The Shimano Deore FC-M615 38T Chainring is an aluminum component designed for 10-speed bicycle drivetrain systems. It is engineered for reliable power transfer and efficient performance across various terrains, including trail riding and mountain biking. This chainring is intended to be paired with a 24T chainring for optimal gearing options.

- **Material:** Constructed from high-strength aluminum alloy for durability and lightweight performance.
- **Compatibility:** Designed for 10-speed Deore drivetrain systems with a 104 BCD (Bolt Circle Diameter) and 4-bolt, 104/64 pattern.
- **Tooth Count:** 38 teeth, optimized for various terrains when paired with a 24T chainring.
- **Finish:** Features a black anodized finish for corrosion resistance and a sleek appearance.



Figure 1: Top view of the Shimano Deore FC-M615 38T Chainring, showing the tooth profile and bolt holes.

## 2. SPECIFICATIONS

<b>Brand</b>	SHIMANO
<b>Model Number</b>	Y1P098010 (FC-M615)
<b>Material</b>	Aluminum
<b>Tooth Count</b>	38T

<b>Drivetrain Compatibility</b>	10-speed
<b>Bolt Circle Diameter (BCD)</b>	104 BCD
<b>Bolt Pattern</b>	4-bolt, 104/64
<b>Color</b>	Black
<b>Item Weight</b>	0.27 Pounds (approx. 122 grams)
<b>UPC</b>	689228580503

### 3. INSTALLATION GUIDE

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Proper installation is crucial for the performance and longevity of your chainring. If you are unsure about any step, consult a professional bicycle mechanic.

#### 3.1 Required Tools

- Hex wrench set (typically 5mm or 6mm for chainring bolts)
- Chainring bolt wrench (optional, but recommended for securing nuts)
- Torque wrench (recommended for precise tightening)
- Degreaser and clean rags
- Thread locker (optional, for chainring bolts)

#### 3.2 Installation Steps

**1. Remove Existing Chainring:**

If replacing an old chainring, use a hex wrench to loosen and remove the four chainring bolts that secure the old chainring to the crank arm spider. Hold the back of the chainring nut with a chainring bolt wrench if necessary. Carefully remove the old chainring.

**2. Clean Crank Arm Spider:**

Thoroughly clean the crank arm spider where the new chainring will sit. Remove any dirt, grease, or old thread locker residue using degreaser and a clean rag. Ensure the surface is dry before proceeding.

**3. Position New Chainring:**

Align the Shimano Deore FC-M615 38T Chainring with the bolt holes on the crank arm spider. Ensure the chainring is oriented correctly; typically, the markings (e.g., "38T") face outwards. The chainring is designed to be paired with a 24T chainring, so ensure proper alignment if installing both.



**Figure 2:** Angled view of the Shimano Deore FC-M615 38T Chainring, showing the bolt holes and chain guide pins.

#### 4. Install Chainring Bolts:

Insert the chainring bolts through the chainring and into the crank arm spider. Apply a small amount of thread locker to the bolt threads if desired. Hand-tighten all four bolts initially.

#### 5. Torque Chainring Bolts:

Using a hex wrench and a chainring bolt wrench (if needed), tighten the bolts in a cross-pattern (e.g., tighten top, then bottom, then left, then right) to ensure even pressure. Refer to your crankset manufacturer's specifications for the correct torque values, typically between 8-10 Nm. Using a torque wrench is highly recommended to prevent over-tightening or under-tightening, which can damage components or lead to loosening during use.

#### 6. Final Check:

After tightening, ensure the chainring is securely mounted and does not wobble. Rotate the crank arms to check for any rubbing or misalignment with the front derailleur. Adjust the front derailleur if necessary to accommodate the new chainring and ensure smooth shifting.

## 4. OPERATING INSTRUCTIONS

The FC-M615 38T chainring is designed for optimal performance within a 10-speed drivetrain system, specifically when paired with a 24T inner chainring. Proper operation involves understanding its role in shifting and power transfer.

- **Shifting:** This chainring is the larger (outer) ring in a 2x10 setup. Shift to this chainring for higher speeds and when descending or riding on flat terrain. Ensure smooth and precise shifts using your front derailleur. Avoid shifting under heavy load to prevent premature wear and chain drops.
- **Chain Line:** Maintain an optimal chain line by avoiding extreme cross-chaining (e.g., large chainring with the largest cog on the cassette, or small chainring with the smallest cog). This reduces wear on the chainring, chain, and cassette.
- **Power Transfer:** The robust aluminum construction ensures efficient power transfer from your pedals to the rear wheel. Apply consistent pedal pressure for best results.

## 5. MAINTENANCE

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Regular maintenance extends the life of your chainring and ensures consistent performance.

### 1. Cleaning:

After each ride, especially in muddy or dusty conditions, clean the chainring. Use a brush and bicycle-specific degreaser to remove dirt and grime from the teeth and surfaces. Rinse thoroughly with water and dry completely.

### 2. Inspection:

Periodically inspect the chainring teeth for wear. Worn teeth often appear pointed or "shark-finned." Also, check for any bent or damaged teeth. Replace the chainring if significant wear or damage is observed, as this can lead to poor shifting and chain drops.

### 3. Bolt Check:

Regularly check the chainring bolts for tightness. Loose bolts can cause creaking noises, poor shifting, or even lead to the chainring detaching. Re-torque to manufacturer specifications if necessary.

### 4. Chain Condition:

A worn chain can accelerate chainring wear. Regularly check your chain for stretch and replace it when necessary. A new chain on a worn chainring can also cause issues.

## 6. TROUBLESHOOTING

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Here are common issues and their potential solutions related to your chainring.

### • Chain Drops:

If the chain frequently drops off the chainring, check the front derailleur adjustment. Ensure it is properly aligned and the limit screws are set correctly. Also, inspect the chainring teeth for excessive wear or damage. A worn chain or chainring can cause chain drops.

### • Poor Shifting:

Difficulty shifting between chainrings can indicate a misaligned front derailleur, incorrect cable tension, or a worn chain/chainring. Ensure all components are clean and properly lubricated. Check for bent chainring teeth.

### • Creaking Noise from Crankset:

Creaking noises often stem from loose components. Check that all chainring bolts are tightened to the specified torque. Also, inspect the bottom bracket and crank arms for tightness.

### • Excessive Wear:

Premature wear on the chainring can be caused by riding with a worn chain, improper chain line, or frequent shifting under heavy load. Regular cleaning and maintenance, along with proper riding technique, can extend chainring life.

## 7. WARRANTY AND SUPPORT

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For specific warranty information regarding your Shimano Deore FC-M615 38T Chainring, please refer to the official Shimano website or contact the retailer from whom the product was purchased. Warranty terms and conditions may vary by region and retailer.

For additional support, technical documents, or to locate an authorized service center, visit the official [SHIMANO Store](#) or their global website.