TEKTRO MIRA MD-C400

TEKTRO MIRA MD-C400 Mechanical Disc Brake Set User Manual

Model: MD-C400

1. Introduction

This manual provides essential information for the proper installation, operation, and maintenance of your TEKTRO MIRA MD-C400 Mechanical Disc Brake Set. Please read this manual thoroughly before attempting any installation or adjustment to ensure safe and optimal performance of your bicycle's braking system. This brake set is designed for Cyclocross (CX) and Road bicycle applications.

2. Safety Information

- Always wear appropriate safety gear, including eye protection, when installing or servicing bicycle components.
- If you are unsure about any part of the installation or adjustment process, consult a qualified bicycle mechanic.
- Ensure all bolts are tightened to the manufacturer's recommended torque specifications. Overtightening or undertightening can lead to component failure.
- Brakes are critical safety components. Regularly inspect your brake system for wear, damage, and proper function.
- Brake rotors and calipers can become very hot during use. Avoid touching them immediately after riding.
- Keep brake pads and rotors free from oil, grease, or other contaminants, as this will severely reduce braking performance.

3. Package Contents

Your TEKTRO MIRA MD-C400 Mechanical Disc Brake Set package should include the following components:

- 1 x Front Mechanical Disc Brake Caliper
- 1 x Rear Mechanical Disc Brake Caliper
- 2 x 160mm Brake Rotors

- 12 x Rotor Mounting Bolts (6 per rotor)
- Caliper Mounting Bolts (various lengths for front/rear, depending on frame/fork)
- Optional: Post Mount to IS Mount Adapters (if required for your frame/fork)

Image 3.1: Complete TEKTRO MIRA MD-C400 Mechanical Disc Brake Set, including front and rear calipers, two 160mm rotors, and all necessary mounting hardware.

4. Setup and Installation

Before beginning, ensure your bicycle frame and fork are compatible with disc brakes and have the correct mounting points (Post Mount or IS Mount). You may need specific adapters depending on your setup.

4.1. Rotor Installation

1. Carefully remove the wheel from your bicycle.
2. Align the 6-bolt rotor with the mounting holes on your wheel hub. Ensure the rotation arrow on the rotor points in the direction of forward wheel rotation.
3. Insert the six rotor mounting bolts and tighten them in a star pattern to ensure even pressure. Refer to your hub manufacturer's specifications for torque values, typically around 4-6 Nm.
4. Repeat for the other wheel.

Image 4.1: A single TEKTRO MIRA MD-C400 caliper, 160mm rotor, and mounting bolts. Note the 6-bolt rotor design.

4.2. Caliper Installation

1. Mount the appropriate caliper (front or rear) to your fork or frame's disc brake mounts. If using IS mounts, you will need the correct adapter.
2. Insert the caliper mounting bolts, but do not fully tighten them yet. The caliper should be able to move slightly.
3. Reinstall the wheel into the fork/frame, ensuring it is properly seated and secured.
4. Connect the brake cable to the caliper's actuation arm. Ensure the cable is routed correctly and securely clamped.
5. **Caliper Alignment:**
    - Loosen the caliper mounting bolts slightly so the caliper can move.
    - Squeeze the brake lever firmly and hold it. This will center the caliper over the rotor.
    - While holding the brake lever, tighten the caliper mounting bolts evenly. Release the brake lever.
    - Spin the wheel to check for rotor rub. If rubbing occurs, repeat the alignment process. Fine-tune adjustment may be needed using the pad adjustment knob.

Image 4.2: Close-up view of the TEKTRO MIRA MD-C400 caliper, highlighting the pad adjustment dial for fine-tuning clearance.

4.3. Brake Pad Adjustment

The MD-C400 features an adjustable pad mechanism. Use the adjustment dial (often marked "ADJ" or with arrows for "IN" and "OUT") on the caliper body to move the stationary pad closer to the rotor. Adjust until the pad is close to the rotor without rubbing, ensuring proper lever feel and engagement.

4.4. Cable Tension Adjustment

Adjust the cable tension at the brake lever and/or the caliper barrel adjuster to achieve the desired lever feel and brake engagement point. Ensure there is no excessive slack in the cable and that the brake engages firmly before the lever touches the handlebar.

5. Operating Instructions

5.1. Bedding-In New Brakes

New disc brakes require a "bedding-in" process to achieve full braking power and consistent performance. This process transfers a layer of pad material onto the rotor surface.

1. Find a safe, open area with no traffic.
2. Accelerate to a moderate speed (approx. 15-20 mph).
3. Apply the brakes firmly but gradually, without locking the wheels, until you slow to walking speed. Do not come to a complete stop.
4. Repeat this process approximately 20-30 times for each brake (front and rear).
5. Allow the brakes to cool down between sets of applications.
6. You should notice an increase in braking power and a more consistent feel as the pads bed in.

5.2. Braking Technique

- Use both front and rear brakes simultaneously for optimal stopping power and control.
- The front brake provides most of the stopping power; the rear brake helps with stability and speed modulation.
- Modulate brake pressure to avoid skidding, especially in wet or loose conditions.

6. Maintenance

6.1. Regular Inspection

- **Brake Pads:** Check pad wear regularly. Replace pads when the friction material is worn down to approximately 0.5mm or less.
- **Rotors:** Inspect rotors for bends, cracks, or excessive wear. Replace if damaged or if the thickness falls below the minimum recommended (usually marked on the rotor).
- **Cables:** Check brake cables for fraying, corrosion, or excessive friction. Lubricate or replace as needed.
- **Mounting Bolts:** Periodically check all mounting bolts (caliper and rotor) for tightness.

6.2. Cleaning

- Clean rotors with a clean cloth and isopropyl alcohol or a dedicated disc brake cleaner. Avoid using lubricants or harsh chemicals.
- Keep calipers clean from dirt and debris.

6.3. Pad Replacement

To replace brake pads, remove the wheel, then remove the pad retention pin or clip from the caliper. The old pads can then be pulled out. Insert new pads, ensuring they are correctly seated, and re-secure the retention pin/clip. Reinstall the wheel and re-align the caliper if necessary. Bed-in new pads as described in Section 5.1.

7. Troubleshooting

Problem	Possible Cause	Solution
Poor braking power	Pads not bedded in	Perform bedding-in procedure (Section 5.1)
	Contaminated pads/rotor	Clean rotor with isopropyl alcohol; replace pads if contaminated
	Worn pads	Replace brake pads
	Loose cable tension	Adjust cable tension (Section 4.4)
Squealing/Noise	Contaminated pads/rotor	Clean rotor; replace pads if contaminated
	Caliper misalignment	Re-align caliper (Section 4.2)
	Loose bolts	Check and tighten all mounting bolts
Rotor rubbing	Caliper misalignment	Re-align caliper (Section 4.2)
	Bent rotor	True rotor or replace if severely bent
	Pad adjustment too tight	Adjust stationary pad (Section 4.3)

8. Specifications

Model	TEKTRO MIRA MD-C400
Brake Type	Mechanical Disc Brake
Rotor Size	160mm (6-bolt)
Compatibility	Cyclocross, Road Bicycles
Caliper Material	Aluminum
Item Weight	Approximately 1.57 pounds (for the set)
UPC	658738434125

9. Warranty and Support

For warranty information or technical support regarding your TEKTRO MIRA MD-C400 Mechanical Disc Brake Set, please refer to the documentation provided with your purchase or contact the retailer or manufacturer directly. Keep your proof of purchase for warranty claims.