

TEKTRO HD-M745

TEKTRO Orion HD-M745 Front Hydraulic Bicycle Disc Brake System User Manual

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1. INTRODUCTION

This manual provides detailed instructions for the installation, operation, and maintenance of your TEKTRO Orion HD-M745 Front Hydraulic Bicycle Disc Brake System. Please read this manual thoroughly before use to ensure proper function and safety.

2. SAFETY INFORMATION

Always wear appropriate safety gear, including a helmet, when riding a bicycle. Ensure all components are correctly installed and tightened according to specifications. Improper installation or maintenance can lead to brake failure, resulting in serious injury or death. If you are unsure about any installation or maintenance procedures, consult a qualified bicycle mechanic.

- Regularly inspect brake pads for wear and replace as necessary.
- Check brake fluid levels and bleed the system if braking performance is compromised.
- Ensure brake levers are easily accessible and provide adequate stopping power.
- Avoid sudden, hard braking, especially on loose or wet surfaces, to prevent loss of control.

3. PRODUCT OVERVIEW

The TEKTRO Orion HD-M745 is a high-performance front hydraulic disc brake system designed for bicycles. It features a 4-piston caliper for powerful and controllable braking, paired with a forged aluminum lever for durability and precise modulation.

Key Components:

- **Brake Lever:** Forged Aluminum Lever / Cast Aluminum Bracket with reach adjustment and a two-piece hinged bracket.

- **Brake Caliper:** 4-Piston, Forged Aluminum Body designed for easy top-loading pad replacement.
- **Brake Pads:** Overall balance resin pad for consistent performance.
- **Brake Fluid:** Non-corrosive Mineral Oil with excellent heat expansion properties.
- **Hose:** 1800mm length for front wheel application.



Figure 1: TEKTRO Orion HD-M745 Front Hydraulic Disc Brake Lever. This image shows the complete brake lever assembly, including the forged aluminum lever and cast aluminum bracket, designed for left-hand operation.



Figure 2: TEKTRO Orion HD-M745 4-Piston Brake Caliper. This image highlights the forged aluminum body of the 4-piston caliper, which provides strong and consistent braking force.

4. SETUP & INSTALLATION

Proper installation is critical for the safe and effective operation of your hydraulic disc brakes. Follow these steps carefully. If you are not confident in your mechanical abilities, seek professional assistance.

4.1 Tools Required:

- Hex wrenches (various sizes)
- Torque wrench
- Brake fluid (Mineral Oil)
- Bleed kit (if bleeding is required)
- Clean rags
- Safety glasses and gloves

4.2 Caliper Installation:

1. Mount the caliper to the fork using the appropriate bolts and adapters (if necessary). Ensure the caliper is aligned correctly with the rotor.
2. Tighten the caliper mounting bolts to the manufacturer's specified torque.

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Video 1: Installation of a 4-Piston Hydraulic Disc Brake Set. This video demonstrates the process of installing a 4-piston hydraulic disc brake caliper onto a bicycle frame, showing how to secure it and ensure proper alignment with the disc rotor.

4.3 Lever Installation:

1. Mount the brake lever onto the handlebar. The HD-M745 is a left-hand lever for the front brake.
2. Adjust the lever position for comfortable reach and ergonomic placement.
3. Tighten the lever clamp bolts to the manufacturer's specified torque.

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Video 2: Assembly of Hydraulic Brake Hose to Lever. This video illustrates the steps involved in connecting the hydraulic brake hose to the brake lever, including securing the fitting and ensuring a leak-free connection.

4.4 Bleeding the System:

After installation, or if the brake lever feels spongy, the hydraulic system may need to be bled to remove air bubbles. Refer to a detailed hydraulic brake bleeding guide or consult a professional mechanic.

5. OPERATING INSTRUCTIONS

The TEKTRO Orion HD-M745 provides powerful and modulated braking. Familiarize yourself with the brake's feel before riding at speed.

- **Brake Lever Feel:** The lever should feel firm and consistent throughout its pull. A spongy feel indicates air in the system or low fluid.
- **Modulation:** Hydraulic brakes offer excellent modulation, allowing you to control braking force precisely. Practice applying varying amounts of pressure to the lever to understand its response.
- **Reach Adjustment:** Use the reach adjustment screw on the lever to set the distance from the handlebar to the lever blade, optimizing comfort and control for your hand size.

6. MAINTENANCE

Regular maintenance ensures optimal performance and extends the life of your brake system.

6.1 Brake Pad Replacement:

The 4-piston caliper allows for easy top-loading pad replacement. When pads wear down to approximately 0.5mm thickness, they should be replaced. Use genuine TEKTRO replacement pads for best performance.

1. Remove the retaining pin or clip from the top of the caliper.
2. Slide out the old brake pads.
3. Gently push the pistons back into the caliper using a plastic tire lever or a dedicated piston tool.
4. Insert the new brake pads, ensuring they are correctly seated.
5. Reinstall the retaining pin or clip.

6.2 Brake Fluid Check and Bleeding:

Check the brake fluid reservoir periodically. If the fluid level is low or the brakes feel spongy, the system needs bleeding. Only use non-corrosive mineral oil as specified by TEKTRO.

6.3 Cleaning:

Keep the calipers, rotors, and pads clean. Use a clean cloth and isopropyl alcohol to clean rotors. Avoid getting oil or grease on the brake pads or rotors, as this will severely reduce braking performance.

7. TROUBLESHOOTING

Problem	Possible Cause	Solution
Spongy brake lever	Air in the hydraulic system, low fluid level.	Bleed the brake system. Check for leaks.
Reduced braking power	Worn brake pads, contaminated pads/rotor, air in system.	Replace pads, clean rotor/pads with isopropyl alcohol, bleed system.
Brake squeal/noise	Contaminated pads/rotor, misaligned caliper, worn pads.	Clean rotor/pads, realign caliper, replace pads.
Brake drag	Misaligned caliper, sticky pistons.	Realign caliper, clean and lubricate pistons (consult mechanic).

8. SPECIFICATIONS

- **Brand:** TEKTRO
- **Model:** HD-M745
- **Type:** Front Hydraulic Bicycle Disc Brake System
- **Lever Material:** Forged Aluminum Lever / Cast Aluminum Bracket
- **Caliper Material:** 4-Piston, Forged Aluminum Body
- **Hose Length:** 1800mm
- **Brake Fluid:** Non-Corrosive Mineral Oil
- **Pad Type:** Overall balance resin pad
- **Weight (Front Wheel, Excludes Rotor, Adapter & Mounting Bolts):**251 Grams

- **Rotor Compatibility:** 1.8mm thickness (rotor sold separately)
- **Special Features:** Reach Adjustment, Two-Piece Hinged Bracket, Compatible with I-spec II® & Matchmaker®
- **Item Weight:** 8.8 ounces
- **Product Dimensions:** 9.95 x 8.63 x 3.11 inches
- **Manufacturer Part Number:** TEKTRO_4717592030228

9. WARRANTY & SUPPORT

For warranty information and technical support, please refer to the official TEKTRO website or contact your authorized TEKTRO dealer. Keep your proof of purchase for any warranty claims.