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

TEKTRO HD-M745

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PRODUCT OVERVIEW

The TEKTRO Orion HD-M745 is a high-performance front hydraulic bicycle disc brake system designed for powerful and controllable braking. This system features an open design with a 4-piston caliper for enhanced stopping power and modulation. It is engineered for durability and consistent performance in various riding conditions.



Image: The TEKTRO Orion HD-M745 left-hand brake lever, featuring a forged aluminum construction and reach adjustment. The

lever is designed for comfortable and efficient braking control.



Image: The TEKTRON Orion HD-M745 4-piston caliper, constructed from forged aluminum. This caliper design provides strong and consistent braking force.

INSTALLATION AND SETUP

Proper installation is crucial for the safe and effective operation of your TEKTRON Orion HD-M745 brake system. If you are unfamiliar with bicycle brake installation, it is recommended to seek assistance from a qualified bicycle mechanic.

Tools and Materials Required:

- Hex wrenches (appropriate sizes for mounting bolts)
- Torque wrench (for precise tightening)
- Cable cutters (if hose length adjustment is needed)
- Brake fluid (TEKTRON mineral oil recommended) and bleeding kit (if bleeding is required)
- Clean rags and isopropyl alcohol

Installation Steps:

1. **Mount the Brake Lever:** Secure the left-hand brake lever to your handlebar using the two-piece hinged bracket. Position it ergonomically for comfortable reach and access. Tighten the clamp bolts to the

manufacturer's specified torque.

2. **Mount the Caliper:** Attach the 4-piston caliper to your bike's front fork using the appropriate adapter (if necessary) and mounting bolts. Ensure the caliper is aligned correctly over the disc rotor. Tighten the caliper bolts to the specified torque.
3. **Route the Hydraulic Hose:** Carefully route the 1800mm hydraulic hose along your bike frame, securing it with cable ties or frame clips to prevent snagging or interference with moving parts. Ensure there are no sharp bends or kinks in the hose.
4. **Connect the Hose:** Connect the hydraulic hose to both the brake lever and the caliper. Ensure all connections are secure and free from leaks.
5. **Bleed the System (if necessary):** If the hose was cut or if the lever feels spongy, the brake system will need to be bled to remove any air bubbles. Follow the specific bleeding instructions provided by TEKTRO for mineral oil systems.
6. **Adjust Lever Reach:** Use the reach adjustment screw on the brake lever to set the desired distance from the handlebar to the lever blade, ensuring comfortable finger access.
7. **Pad Bedding-In:** After installation, perform a bedding-in procedure for the brake pads. This involves several moderate stops from a medium speed to allow the pads to conform to the rotor surface, optimizing braking performance and reducing noise.

OPERATION

The TEKTRO Orion HD-M745 brake system offers powerful and modulated braking. To operate, gently squeeze the brake lever. The amount of braking force is proportional to the pressure applied to the lever. For optimal control, apply pressure smoothly and progressively.

- **Initial Use:** During the first few rides, braking performance may gradually improve as the pads fully bed-in with the rotor.
- **Modulation:** Practice feathering the brake lever to control speed without locking up the wheel. This system is designed for excellent modulation, allowing fine control over braking power.
- **Wet Conditions:** Braking performance may be slightly reduced in wet conditions. Apply brakes earlier and with more caution.

MAINTENANCE

Regular maintenance ensures the longevity and consistent performance of your TEKTRO Orion HD-M745 brake system.

Routine Checks:

- **Brake Pad Wear:** Regularly inspect brake pads for wear. The pads are designed for easy top-load replacement. Replace pads when the friction material is worn down to approximately 0.5mm or less.
- **Brake Fluid Level:** Check the brake fluid reservoir level periodically. The system uses non-corrosive mineral oil, which has excellent heat expansion properties. If the fluid level is low or the lever feels spongy, the system may require bleeding or a fluid top-up.
- **Hose and Connections:** Inspect the hydraulic hose for any signs of damage, kinks, or leaks. Ensure all connections are tight.
- **Rotor Condition:** Keep disc rotors clean and free from oil, grease, or dirt. Clean with isopropyl alcohol if necessary. Check for excessive wear or damage. The system is compatible with 1.8mm thick rotors.

Pad Replacement:

The Orion HD-M745 caliper allows for easy pad replacement from the top. Remove the retaining pin, slide out the old pads, and insert new pads. Ensure the spring clip is correctly positioned. Use only TEKTRO-approved resin pads for optimal performance.

TROUBLESHOOTING

This section addresses common issues you might encounter with your hydraulic disc brake system.

Symptom	Possible Cause	Solution
Spongy Brake Lever	Air in the hydraulic system	Bleed the brake system to remove air.
Reduced Braking Power	Worn brake pads, contaminated pads/rotor, air in system	Inspect and replace pads. Clean rotor and pads with isopropyl alcohol. Bleed the system.
Squealing Noise	Contaminated pads/rotor, misaligned caliper, worn pads	Clean rotor and pads. Realign caliper. Replace worn pads. Ensure proper bedding-in.
Brake Rubbing	Misaligned caliper, bent rotor, sticky pistons	Realign caliper. Check rotor for trueness. Clean and lubricate caliper pistons.

SPECIFICATIONS

Detailed technical specifications for the TEKTRO Orion HD-M745 Front Hydraulic Bicycle Disc Brake System:

- **Model:** HD-M745
- **Brake Type:** Hydraulic Disc Brake
- **Lever Material:** Forged Aluminum
- **Caliper Material:** Forged Aluminum
- **Piston Count:** 4-Piston Caliper
- **Hose Length:** 1800mm
- **Lever Blade:** 2-Finger
- **Lever Features:** Reach Adjustment, Two-Piece Hinged Bracket
- **Compatibility:** I-spec II® & Matchmaker® (lever)
- **Brake Fluid:** Non-Corrosive Mineral Oil
- **Brake Pads:** Overall balance resin pad, Top-load replacement
- **Rotor Compatibility:** 1.8mm thickness (rotor sold separately)
- **Approximate Weight (Front Wheel, excludes rotor/adaptor/bolts):** 251 Grams
- **Included Components:** Installation Hardware

WARRANTY INFORMATION

Specific warranty terms and conditions for the TEKTRO Orion HD-M745 brake system are not provided in this manual. For detailed warranty information, please refer to the official TEKTRO website or contact your authorized TEKTRO dealer. Keep your proof of purchase for any warranty claims.

CUSTOMER SUPPORT

If you require further assistance, have questions about installation, operation, or maintenance, or need to report an issue, please contact TEKTRON customer support. You can typically find contact information, FAQs, and additional resources on the official TEKTRON website.

Website: www.tektron.com (Please verify the current official website for the most up-to-date information.)