TEKTRO

HYDRAULIC DISC BRAKE SYSTEM

INSTALLATION INSTRUCTION

SECTION 1 GENERAL WARNING & CAUTIONS

- Read instructions thoroughly before attempting any work on Tektro hydraulic disc brakes. It is highly recommended that you seek the service of an authorized Tektro Service Center or other qualified mechanic.
- Disc brake pads, calipers and rotors may become extremely hot when used. Serious injury could result from contact with a hot brake. Care should be taken not to touch the caliper, rotor or disc brake while it is hot. Be sure to allow the brake to cool before attempting to service it in any way.
- Stop riding the bike immediately if the brake fluid is leaking or if there is an insufficient amount of brake fluid resulting in reduced or complete loss of braking power. Please seek qualified service to make the proper repairs. Continued operation with leaking brakes or insufficient brake fluid could result in a loss of braking power which may cause serious injury or death.
- Hydraulic disc brakes inherently offer considerable braking power. Care should be taking during operation to properly maintain control of the bicycle.
- Tektro hydraulic disc brake is not designed to work with the bicycle upside down. The brake may not work correctly, and a serious accident could occur, if the bicycle is turned upside down. Be sure to operate the brake lever a few times to check the brake operate normally.
- If feel no resistance when depressing the brake lever, immediately stop using the brake system, and go to dealer to check for you.

CAUTION

- Before every ride: confirm the brake pad thickness is greater than 2.5mm thickness. (Metal plate & wear material)
- Pads and rotors must be kept clean and free of all contaminants including but not limited to oil, lubricants, hydraulic fluid and solvents.
- If the pads or rotors become contaminated you must discard them and replace them with a new set.
- The brake pads are specifically formulated to achieve optimum use with the Tektro hydraulic disc brake system. Tektro does not guarantee performance with any non-Tektro brand brake pads.

PRECAUTIONS

■ Methods for using mineral oil

(1) Wear safety glasses at all times while using mineral oil. Contact with the eyes may cause inflammation. If mine real oil comes in contact with the eyes, immediately flush with water and seek medical attention.
(2) Wear anti-solvent gloves and long sleeves at all times while using mineral oil. Contact with the skin may cause inflammation. If mineral oil comes in contact with the skin, immediately wash with soap and water. If skin irritation developes, seek medical attention.
(3) Make sure your work area is well ventilated. Inhaling the fumes from the mineral oil may be harmful to your health. If you feel dizziness, nausea or any discomfort from inhalation of mineral oil fumes, seek medical attention.
(4) Do not ingest mineral oil. Ingestion of mineral oil may cause severe abdominal distress and vomiting and is harmful to your health. If ingested, immediately contact your nearest poison control center and seek medical attention.
(5) Keep mineral oil away from children.
(6) Do not cut or puncture the mineral oil container. Avoid excessive heat or pressure which may cause the mineral oil to explode or catch fire.

■ Waste Oil

Please deal with it according to the laws of your country.

■ How To Store Mineral Oil

(1) Please keep it under normal room temperature and in a dark place.
(2) Keep it out of direct sunlight.

GENERAL MAINTENANCE

■ Pad replacement

Pads should be replaced if they become contaminated or have less than 2.5mm thickness. (Metal plate & wear material)

■ Before riding

· Check the pads for wear or contamination.
· Check the hose for cracking, wear or deformation. Replace if necessary.
· Check if the brake system is operating correctly.

■ After riding

· Remove any mud or contamination from the rotor slot on the caliper.
· Clean the caliper body with a cloth.

■ At regular intervals

· Check the oil level in the reservoir.
· Lubricate the brake lever pivot with grease.
· Check to make sure that all the bolts are tightened to the correct torque specifications.

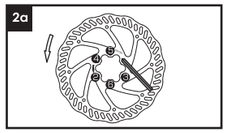
SECTION 2 INSTALLATION & ADJUSTMENT

■ Tools And Equipment Required

The following tools are necessary to install the Tektro hydraulic disc brake:

· 2.5mm Allen Wrench · 5mm Allen wrench
· 3mm Allen wrench · 8mm Spanner
· 4mm Allen wrench · T25 Torx® wrench

2a

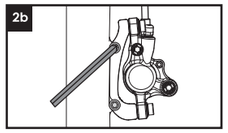


■ Mounting the rotor to the hub (See 2a)

(1) Remove the wheel from the bike. Attach the rotor to the hub with the supplied Torx® bolts and tighten it with a T25 Torx® wrench. Final tightening torque: 4-6Nm.
(2) Install the wheel on the bike according to the manufacturer's instructions.

NOTE - The rotor must be installed with the "rotation" arrows pointing in the same direction as the forward rotation of the wheel.

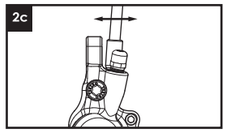
2b



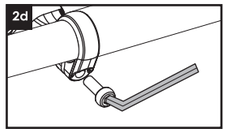
■ Mounting the adapter (See 2b)

(I) Before installing the calipers, ensure each wheel axle is correctly seated in the dropouts. (The brake rotor should be on the caliper mounting side)
(2) Select the correct adapter (front or rear) for the size of rotor. If your frame and/or fork utilizes IS disc, brake mounts you will need the included IS-to-post mount caliper adapter.
(3) Holding the adapter, with the engraved "F" or "R" facing toward you (away from the rotor and wheel), position it behind the frame/fork mounting holes. Bolt the adapter in this position to the frame/fork mounts. Now the engraved "F" or "R" should not be visible behind the mounts. Tighten the bolts to a final tightening torque of 6-8Nm.
(4) Make sure the pads are correctly positioned in the caliper. Attach the caliper to the adapter using the supplied Allen bolts. Do not fighten the bolts at this stage.
(5) With the caliper mounting bolts still loose, depress the brake lever. The caliper will correctly center itself to the rotor. Keeping the brake lever depressed, tighten the caliper mounting bolts. Final fightening torque: 6-8Nm.

2c



2d



■ Adjust Hose Angle (See 2c)

Caliper with banjo connector can adjust hose angle to improve hose routing.
(1) A little loosen the banjo bolt with M5 Allen wrench and adjust hose angle for proper routing.
(2) Re-tighten the banjo bolt with tighten torque 5-6Nm.
(3) This adjustment maybe cause air into the caliper. Check if the brake system is operating correctly before riding.
(4) If brake feeling is soft then need to bleed the system.

■ Mounting the brake levers (See 2d)

(1) Install the brake lever onto the handlebars in proper position and the brake hose pointing towards the center of the handlebar.
(2) Tighten the brake lever in the desired position by tightening it with the 4mm Allen bolt. Final tightening torque : 6-8 Nm.
(3) Once you have the lever assembly positioned appropriately, you can adjust the reach of the blade by 2mm Allen wrench to suit your preference.

CAUTION - Do not completely remove any of the bolts on the lever.

SECTION 3 REMOVING THE PADS

The pads and rotor must be kept clean and free from oil or hydraulic fluid. If the pads become contaminated you must discard them and replace them with a new set. The brake pads are specifically formulated to achieve optimum use with the Tektro hydraulic disc brake system.

■ Removing the brake pads

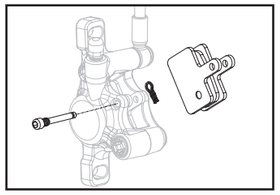
(1) The Tektro hydraulic disc brake pads and pad connecting spring are held in place by a 3mm pad retainer bolt on the caliper. To remove the pads and pad connecting spring, unscrew the retainer bolt. Then gently push out the pads and holder - this may be easiest to achieve by using the Allen wrench.
(2) Once free of the caliper, the pads may be easily removed from the pad connecting spring.

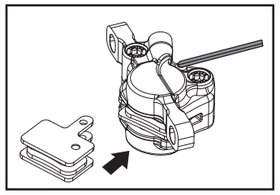
■ Installing the brake pads

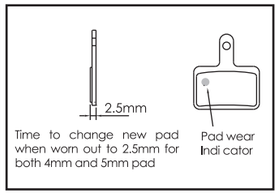
(1) Position each pad on an opposite side of the holder so that the two braking surfaces are facing each other.
(2) Taking care not to touch the braking surfaces, push the pads in the holder together and insert into the caliper so that the protruding lip with the retainer bolt hole is aligned with the bolt hole on the caliper.
(3) Insert the retainer bolt and tighten it with a 3mm Allen wrench. Final tightening torque should be 3-5 Nm.

NOTE - New pads require about 10 full stops to achieve their optimum braking power.

WARNING - Tektro hydraulic disc brake offers considerable braking power. Test your Tektro hydraulic disc brake gradually on a flat surface until you become accustomed to the braking power. If you lend your bike to another person, make sure they are also properly accustomed to the brake power before riding.







SECTION 4 BLEED THE SYSTEM

You should always bleed the system after you have shortened or replaced the hose or have opened the system to the air at any time. Additionally, if the brake action feels spongy, you may improve performance by re-bleed the system.

■ Tools And Equipment Required

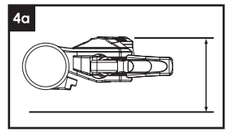
1. 2mm Allen wrench 6. Piece of tubing
2. 4mm Allen wrench 7. Tektro brake fluid
3. 7mm spanner 8. Piston holder
4. T15 Torx® wrench 9. A clean, empty bottle or plastic bag
5. 20cc syringe 10. A cleaning towel

CAUTION - Cleanliness is a very important part of any maintenance of the Tektro hydraulic disc brake. If the pads or rotor become contaminated with oil, or if the hydraulics become contaminated with impurities, braking performance will be greatly impaired. Use only Tektro brake fluid with the Tektro hydraulic disc brake. Other brake fluids may not be compatible and may damage the system.

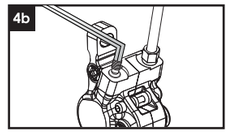
■ Step By Step Guide (See 4a - 4e)

- Place the bike in a stand. Position lever so that it sits parallel to the ground. (See 4a)
- Remove disc brake pads to avoid contamination during the bleed procedure.
- Insert a disc brake piston setting tool or other non-sharp tool and push the pistons back into the caliper.
- Insert Tektro bleed block into caliper. Bleed block ensures that pistons will not move inward during bleed procedure.
- Using a T15 Torx, screw out the bolt where caliper bleed port. (See 4b)
- Attach a section of plastic tubing with knurled silver bleed fitting to your syringe (supplied with bleed kit). Fill Syringe halfway with Tektro Mineral Oil. Hold the Syringe vertically with the tip up and tap out any air bubbles. Install the knurled silver bleed fitting (supplied with the bleed kit) into the caliper bleed port.
- Using a T15 Torx, remove the Reservoir bleed plug. Set aside.
- Install the knurled silver bleed fitting (supplied with the bleed kit) into the reservoir bleed port. Firmly attach a long plastic tube over the bleed fitting, placing the other end into a clean, dry empty bottle or plastic bag .(See 4c)
- Start filling the brake with new mineral oil by slowly pushing the syringe. Air bubbles may come out of the reservoir. Continue pushing fluid until you no longer see bubbles coming out of the tube .(See 4d)
- Remove the plastic bag or collection bottle, section of tube, and knurled bleed fitting from the brake lever reservoir. Re-install the T-15 reservoir bleed plug. Tighten to 2-4Nm.
- With the bleed plug installled at the reservoir, you may now remove the syringe and knurled bleed fitting from the caliper. Re-install the T-15 caliper bleed plug. Tighten to 2-4Nm.
- Wipe off any excess oil from the lever and caliper body.
- Remove 2-Piston Bleed Block and reintstall the brake pads.

4a



4b



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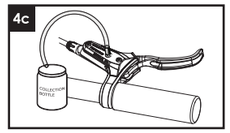

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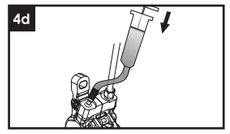

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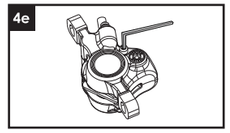
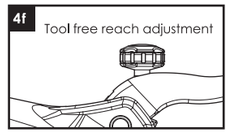
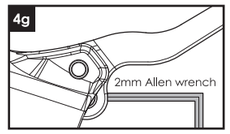


4f



4g



■ Adjust Lever Reach (See 4f - 4g)

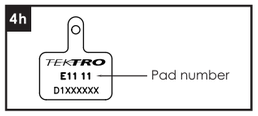
4f. Tool free reach adjustment type-by the reach adjustment knob on the lever.
4g. By tightening the 2 mm reach-adjuster bolt on the lever.

Warning: TEKTRO had implemented 2 key improvements this year for better performance, 2.3mm thickness rotors and 5.0mm brake pads.

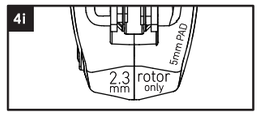
If there is lasered "5.0mm Pad" and (or) "2.3mm rotor only" or "E.2.3" on the caliper of your hydraulic disc brakes, please make sure to replace your brake pads and rotors according to the original setup of each model. You can find more information about 2.3mm rotors and 5.0mm pads on TEKTRO website. (See 4i)

Rotor replacement:
2.3mm thickness rotor should be replaced if worn to 1.9mm thickness.
1.8mm thickness rotor should be replaced if worn to 1.5mm thickness.

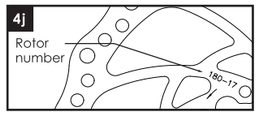
4h



4i



4j



WARRANTY

Tektro disc brakes are warranty against manufacturing defects in materials and /or workmanship for a period of two years period from the date of original retail purchase.

· This warranty does not apply product is damage resulting from improper installation, adjustment or maintenance, lack of maintenance, alterations, crashes or use judged by Tektro to be excessive or abusive.
· This warranty does not apply normal wear and tear.
· This warranty does not cover when product has been modified.
· This warranty does not cover any damages caused by using parts from other manufacturer.

For warranty related questions or more information on the Tektro disc brake, please contact a Tektro Service Center or contact us directly at :

TEKTRO

EZ PLUG-IN

INSTALLATION INSTRUCTION

TOOLS NEEDED

1. T15 Torx wrench
2. 4mm Allen wrench
3. Clean shop towel
4. Isopropyl alcohol

TOOLS NEEDED FOR LEVER PURGE (IF NECESSARY)

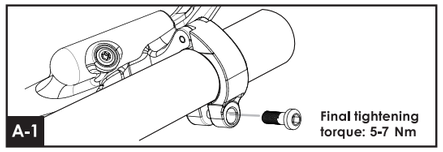
1. bleed fitting
2. Syringe with bleed hose
3. TEKTRO mineral oil

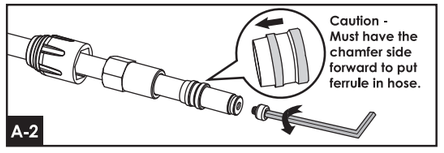
A) MOUNTING BRAKE LEVERS

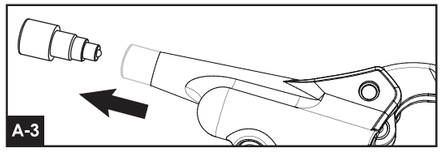
- Install the brake lever onto the handlebars in proper riding position with the brake hose running through the center of the handlebar.
- Place brake lever in desired position, tighten the 4mm Allen bolt to 6-8 Nm. (See A-1)
- Before removing hose plug, determine hose length. If hose needs to be cut do so without removing the plug. If length is correct simply remove hose plug with 1.5mm Allen wrench. **Caution: Do not actuate lever while lever plug is removed.** (See A-3)
- Once line is cut or plug is removed, in the following order install compression nut, olive, then barb. (See A-2: Must have the chamfer side of the olive facing the compression nut.)
- Plug hose into lever and torque compression nut to 6-8 Nm.(See A-4)

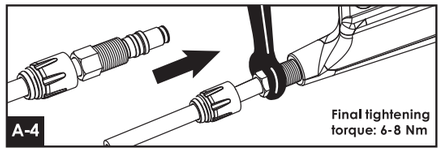
B) System Test

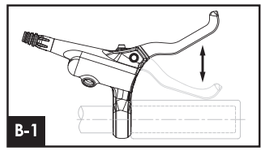
- Although the system has been bled and tested before leaving the factory, it is possible for air to enter the system during installation. The system should be tested before being ridden.
- Press the lever 1-2 times. If the lever feels solid when com pressed and does not pull to the bar the system is ready to ride please move on to step 7. If the brake is feeling soft or pulls to the bar, continue on to step 2 for bleeding instruc tions. (See B-1)
- Adjust lever so the bleed port is at the highest point. (See B-2) Remove the bleed port plug. Visually check for oil in the bleed port if it is not full move on to step four. If bleed port is full with fluid and the lever is still soft the system may need a full bleed by a certified mechanic.
- Install bleed fitting. Attach bleed hose that is half filled with mineral oil.
- Press lever 10-15 times or until air bubbles no longer come out of the lever.
- Remove bleed fitting and thread bleed port plug back into the lever.
- Wipe the lever clean with shop towel and isopropyl alcohol.
- If brake still feels soft have a certified mechanic perform a system bleed .











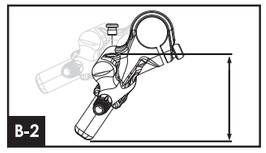
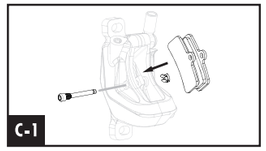
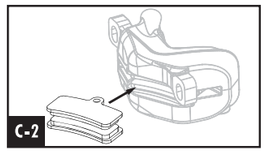


Diagram Notes: Caution: Must have chamfer side facing compression nut.

INSTAL BRAKE PAD

- Pull the cotter pin from the brake pad retaining bolt – be careful not to lose this piece – and loosen the bolt with 0.3mm Allen key.
Slowly pull the bolt out of its sleeve and set the bolt and cotter pin aside.
- Remove the pads from the either the top of bottom of the caliper. Be careful to save the spring assembly for later use.
- If piston is not fully retracted into its housing, using a disc pad setting tool or other non-stop tool, such as a plastic tire lever, push back the pistons in evenly.
- Install new pads and spring assembly into the calipers. Reinsert brake pad retaining bolt into the caliper and reattach the cotter pin.
Tighten the brake pad retaining bolt. (See C-1, C-2)





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