

**TEKTRO**  
**AQUILA**

&

**TEKTRO**  
**LYRA**

&

**IO**

&

**TEKTRO**  
**NOVELA**

**TEKTRO**

TEKTRO TECHNOLOGY CORPORATION

[http:// www.tektro.com](http://www.tektro.com)

E-mail: [info@tektro.com.tw](mailto:info@tektro.com.tw)

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## Mechanical Disc Brake Owner's manual



Let's look after our world – PLEASE RECYCLE PACKAGING

Congratulations and thank you for your purchase of a Tektro mechanical disc brake.

Mechanical disc brakes offer several advantages over traditional rim brakes better braking in wet, muddy or other adverse conditions, less braking power fade over extended downhill braking and the ability to continue braking even if your rim becomes bent or distorted.

Tektro mechanical disc brakes offer the following design features:

- Quick and easy installation and adjustment of the caliper via Tektro's Automatic Caliper Centering.
- Floating plates that ensure the pads automatically and consistently adjust to the rotor angle.
- Dual pad adjustment.
- Magnetically held pads with wear indicators. ( Io & Novela )
- Friction reducing ball & ramp actuation system.
- Operated by standard linear pull ( V-type ) brakes.
- Rotor designed to maximize both strength and heat dissipation.

To gain full advantage of all the features of your Tektro disc brake, and to ensure safe, trouble-free riding, please read this manual thoroughly before use.

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## Section I - General Information

### a. Glossary

Throughout this manual, we use a system of warnings, cautions and notes to draw your attention to various aspects of the installation process:

**WARNINGS** are written in red with a bold typeface. Warnings are used to draw your attention to extremely important details, where failure to perform the procedure correctly or pay attention to the warning may result in serious injury or even death.

**CAUTIONS** are written in a bold typeface and are used to alert you to anything that may cause damage to either your disc brake, your bike or other property.

*NOTES* are written in italics. Notes are there to draw your attention to and explain features of the disc brake, or to give you other information that will make installing, adjusting, maintaining or using your Tektro disc brake easier.

### b. General warnings and cautions

**WARNING** - Tektro mechanical disc brakes are designed for use with linear pull ( V-type ) brake levers. Brake levers pulling less than 24 mm of cable, should not be used with Tektro mechanical disc brakes.

**WARNING** - Disc brake pads, caliper and rotor get 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 pads while the disc brake is hot. Be sure to allow the brake to cool before trying to service it in any way.

**WARNING** - Read instructions thoroughly before attempting any work on a Tektro mechanical disc brake. If you have any doubts about any part of the service / operation / maintenance of a Tektro mechanical disc brake, you should seek the advice of a Tektro Service center or other qualified mechanic.

**WARNING** - Tektro mechanical disc brakes offer a significant increase in braking performance. Test your 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 that they are also properly accustomed to the braking power before riding.

**CAUTION** - Pads and rotor must be kept clean and free from oil / grease based contamination. If the pads become contaminated they must be discarded and replaced with new ones. A contaminated rotor should be cleaned with a detergent solution, rinsed thoroughly and dried.

*NOTE: Tektro recommends the use of compression less or Kevlar® cable housing to obtain optimum performance from mechanical disc brakes.*



## Section II - Installation and Adjustment

The caliper and rotor for the front and rear of the bike are the same. The only difference between front and rear disc brakes is which adapter should be used to mount the caliper to the bike. The adapter for the front fork is marked with an " F " and is designed to fit forks with international standard disc brake mounts. The rear adapter is marked with an " R " and is designed to fit international standard mounts. These adapters are an integral part of Tektro disc brakes. They allow the setup of the disc brake caliper to be relatively simple.

### a. Tools and equipment required

1. 2mm Allen key
2. 3mm Allen key
3. 5mm Allen key
4. T25 Torx® wrench
5. Cable and housing cutters
6. Pliers

### b. Mounting the rotor to the hub

1.Remove the wheel from the bike. Attach the rotor to the hub with the supplied Torx® bolts and tighten with a T25 Torx® wrench. Final tightening torque: 2-4 Nm.

(see photo b-1)

2.Replace the wheel onto the bike, according to manufacturers' instructions.

*Note: The rotor must be installed with the " rotation " arrows pointing in the same direction as the forward rotation of the wheel.*

### c. Mounting the adapter and caliper

*Note: Although front and rear caliper bodies are the same design, the adapter for the front is marked with an " F " and the adapter for the rear with an " R ".*

(see photo c-1i)

1.Mount the relevant adapter to the caliper body. Insert 5mm bolts through the two adapter slots on the body and screw into the holes on the adapter. Do not tighten yet.

(see photo c-1ii)



b-1. Mount the rotor to the hub



c-1i. Adapters for front and rear



c-1ii. Attach adapter to caliper with 5mm Allen bolts

2.Mount the caliper body and adapter to the frame / fork by placing the slot in the caliper body over the rotor. The mounting holes on the adapter should be behind the frame / fork mounting holes ( the hub side ). Screw and tighten two 5mm Allen bolts into the upper and lower holes in the frame / fork mount. Final tightening torque 6-8 Nm.

(see photo c-2)

3.Check that the rotor is centered between the disc brake pads, and tighten the two bolts holding the caliper to the adapter. To re-adjust the caliper ositioning, loosen these to bolts and slide the caliper over until it is cantered on the rotor, then re-tighten the bolts. Final tightening torque 6-8 Nm.

(see photo c-3)

4.Attach the cable and housing to the brake lever according to the lever manufacturers instructions. Route the cable along the frame / fork of the bike according to the frame / fork manufacturers instructions. Insert the cable through the cable adjuster barrel on the caliper.

(see photo c-4)

5.Making sure that the cable housing is firmly sealed within the cable adjuster barrel, insert the end of the cable through the anchor bolt on the caliper. Take up slack in the cable, then tighten the cable anchor bolt. Final tightening torque 6-8 Nm.

(see photo c-5)

**CAUTION** - Compression less or Kevlar® cable housing **MUST** be used if optimum braking performance is desired.

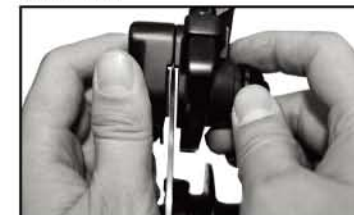
### d. Adjusting the pads and caliper

1.On the Tektro disc brake use a 5mm Allen wrench to adjust the stationary caliper adjusting bolt at the back ( hub side ) of the caliper. Adjust the bolt so that there is a 0.3mm clearance between the stationary ( hub side ) pad and the rotor.

(see photo d-1)



c-2. Mount the caliper behind the fork mount



c-3. Centering the rotor between pads



c-4. Insert cable through adjuster barrel



c-5. Insert cable through anchor bolt



d-1. Adjust the pad adjuster bolt



2.Adjust the cable adjuster bolt on the caliper so that there is 0.3mm of clearance between the outside pad and the rotor.  
(see photo d-2)

3.Adjust the spring tension to the desired modulation by tightening / loosening the tension modulation adjuster bolt on the caliper with a 2mm Allen wrench.  
(see photo d-3)

#### e. Installing and removing pads ( Io & Novela )

**CAUTION - The pads and rotor must be kept clean and free from oil or grease-based contamination. If the pads become contaminated you must discard them and replace them with a new set. A contaminated rotor should be cleaned with a detergent solution, rinsed thoroughly and dried.**

1.Holding the pad end-tab, insert it into the caliper slot with its metal backing towards the piston.Make sure the hole in the metal backing goes over the piston pins. When correctly inserted, the pad will be held in place magnetically. Repeat the procedure for the other pad.  
(see photo e-1)

2.Pads can be removed by grasping the pad end-tab, lifting the pad clear of the piston pin, and then maneuvering it out of the rotor slot in the caliper body.

Note: Tektro disc brake pads are held in the caliper magnetically. No tools are required to install or remove them. As the left and right pads are the same they may be inserted on either the left or right of the caliper.

**WARNING: If you are unsure about any part of the installation process you should seek advice from a Tektro Service center or qualified mechanic.**



d-2. Adjusting the cable adjuster barrel



d-3. Adjusting the tension modulator



e-1. Position pads in the caliper

#### f. Installing and removing pads ( Aquila & Lyra )

**CAUTION - The pads and rotor must be kept clean and free from oil or grease-based contamination. If the pads become contaminated you must discard them and replace them with a new set. A contaminated rotor should be cleaned with a detergent solution, rinsed thoroughly and dried.**

1.The Aquila & Lyra pads and pad holders are held in place by a 3mm pad retainer bolt on the caliper. To remove the pads and pad holder, unscrew the retainer bolt. Then gently push out the pads and holder this may be easiest to achieve by using the Allen wrench.  
(see photo f-1)

2.Once free of the caliper, the pads may be easily removed from the pad holder.

#### g. 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.Take 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.

**WARNING: If you are unsure about any part of the installation process you should seek advice from a Tektro Service center or qualified mechanic.**



f-1. Unscrew pad retainer bolt (Aquila)



f-2. Pads with holder and spacer (Aquila)



f-3. Replace pads and holder (Aquila)



f-1. Unscrew pad retainer bolt (Lyra)



f-2. Pads with holder and spacer (Lyra)



f-3. Replace pads and holder (Lyra)

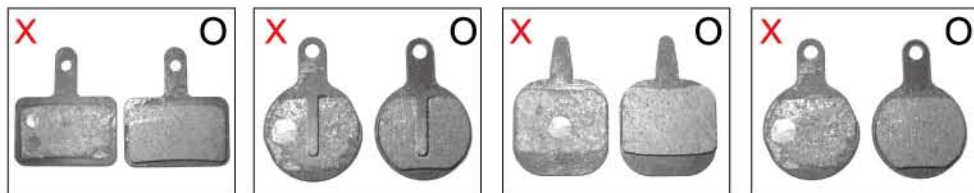
## Section III - Maintenance

Perform the following maintenance procedures as suggested.

### Before Riding

#### a. Pad wear and replacement

Remove the brake pads and check them for wear. If they have worn to the point where the caliper piston pin-positioning hole goes all the way through, then they need to be replaced. (see photos)



A10.11 (Aquila)

L10.11 (Lyra)

N11.11 (Io)

IOX.11 (Novela)

### After Riding

#### b. Cleaning

Remove any mud or other contamination from the rotor slot in the caliper. Clean the caliper body and rotor slot with brake / clutch cleaner.

### At Regular intervals

#### c. Lubricating levers

Lubricate the brake lever pivot with thick oil grease.

#### d. Tightening bolts

Check to make sure all bolts are tightened to torque specifications.

## Section IV – Miscellaneous

#### a. Tektro disc brake warranty

Tektro mechanical 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.

Not covered under this warranty is damage resulting from improper installation, adjustment or maintenance, lack of maintenance, alterations, crashes or use judged by Tektro to be excessive or abusive.

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

Tektro Technology Corporation  
info@tektro.com.tw  
www.tektro.com