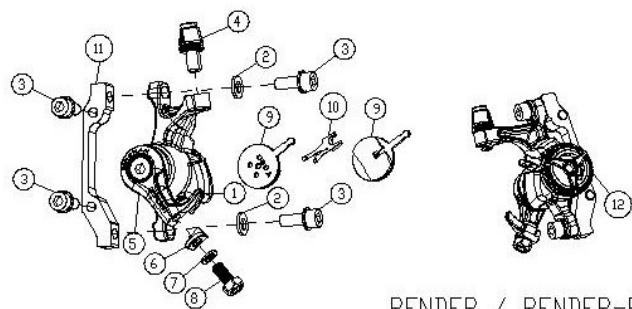


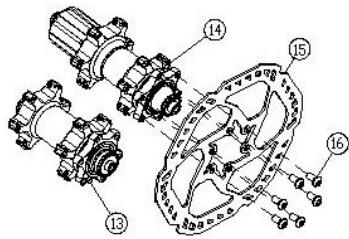
PROMAX RENDER/ RENDER R (DSK-717)

Disc Brake Owner's Manual



RENDER / RENDER-R

ITEM	PART NAME	QTY
1	CALIPER	1
2	WASHER	2
3	BOLT M6X18	4
4	BARREL ADJUSTER	1
5	BRAKE ARM	1
6	CABLE LOCK PLATE	1
7	CABLE LOCK WASHER	1
8	BOLT M6X12	1
9	BRAKE PAD(#PD65.4mm)	2
10	PAD RETURN SPRING	1
11	ADAPTER	1
12	PAD ADJUSTER B	1
13	FRONT HUB	1
14	REAR HUB	1
15	ROTOR	1
16	BOLT M5X11	6



RENDER/RENDER R mechanical disc brakes are designed to precisely fit industry standard brake mounts and systems and have been exhaustively tested to provide the best braking performance.

Your disc brakes should have been correctly installed and properly adjusted by an authorized dealer/professional bicycle mechanic. In some cases, however, you may buy aftermarket disc brakes to replace existing rim brakes on your bike. Although the PROMAX disc brake is designed for easy installation, it is suggested that only trained and experienced technicians or mechanics with the proper tools install the brakes. If you decide to install them yourself, read and follow the manual instructions carefully and in their entirety before installation. This manual provides important information about installation, operation and maintenance. If you have any problems with installation or braking performance, please stop the installation, discontinue riding and contact your nearest authorized retailer for assistance.

Features:

1. 7- 8- and 9-speed compatible
2. Easy installation and low maintenance
3. International standard fittings. (Adapter is required)
4. Manitou® fork fittings (without adapter)
5. All-weather, high-friction brake pads
6. Quick and easy pad replacement
7. Compatible with linear-pull brake levers
8. Manual-adjusting knob for pad wear adjustment

Parts Required:

1. **Caliper:** 1 per wheel
2. **Levers:** 1 pair of linear-pull brake levers
3. **Rotor:** 2mm stainless steel rotor, 1 per wheel; Front rotor = 160mm, Rear rotor = 160mm. (For Manitou® 2000 fork, Front rotor = 160mm)
4. **Brake cable:** 1 per wheel (900mm for front, 1,450mm for rear) or appropriate length to fit the frame
5. **Brake Housing:** 1 per wheel (750mm for front, 1300mm for rear) or appropriate length to fit the frame
6. **Mounting Bolts:** 4 M6 x 18mm with washer, (2 for Manitou® 2000 fork)
7. **Rotor mounting screws:** 6 T25 Torx bolts per rotor

Tools Required:

- 5mm Allen key
- T25 Torx driver
- 10mm open-end wrench
- Cable cutters
- Pliers

Installation Steps:

Read these instructions thoroughly prior to attempting installation for a better understanding of this product and how it works. If you are unsure as to a component, installation procedure, or have any other relevant questions, please contact a professional bicycle dealership.

Step 1 Mount the rotor to the hub using the supplied T25 bolts and tighten in a star pattern to 40-50 kg-cm. The arrow on the rotor must face out. [Photo 1]

Caution:

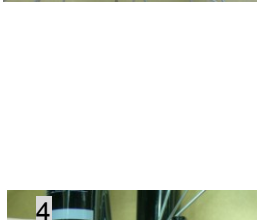
1. Be sure to seat the T25 Torx driver properly before tightening or loosening; otherwise you will run the risk of stripping the hex.
2. The mounting bolts should be replaced after multiple installations and removals, as the Nylock compound wears off after 3 to 4 uses. Please contact a professional bike shop to obtain replacements.
3. Hand tightening first will help prevent stripping the threads.

Step 2 Install the wheel into the fork/frame. [Photo 2]

Step 3 Remove compression module from between brake pads.

Step 4 Mount caliper to the fork/frame using two mounting bolts with washers on the side of adapter. Tighten the bolt to 7-15 kg-cm (The sticker on the back side of adapter indicates F=10.5 for front wheel and R=15.25 for rear wheel.) [Photo 3]

Step 5 Turn the brake arm counterclockwise to compress the two pads firmly on the rotor. The caliper will move automatically and adjust into position. Tighten the mounting bolts (2 M6 x 18mm) on the caliper side into the adapter. (Final tightening torque 55-65 kg-cm) Then release the brake arm. [Photo 4]



Step 6 Turn pad adjuster B on the back side of caliper about 1/5 turn (72°) counter-clockwise to set correct pad clearance. [Photo 5]

Step 7 Spin wheel in forward rotating direction. Rotor should rotate freely between brake pads. If not, turn the pad adjuster B on the back side of caliper about 1/5 turn (72°) clockwise, loosen the mounting bolts (2 M6 x 18mm) on the caliper side on the adapter and repeat Steps 5-6.

Step 8 Install the lever onto handlebar. Adjust angle according to rider's preference. Tighten the clamp bolt securely. Loosen the barrel adjuster and locking nut so that the grooves on the adjusting barrel, locking nut and lever are aligned. Lightly lubricate cable with clear or white grease. Secure cable end into lever. Guide cable through grooves, tighten the locking nut against the top of the cable barrel adjuster and screw the barrel adjuster fully into the lever body. Slide cable through housing. [Photo 6]

Step 9 Guide housing through cable guides on frame (rear brake only). Make sure the barrel adjuster is screwed in all the way before installing the cable. Insert the cable through the barrel adjuster on the caliper. Cable should be between the cable lock plate and the brake arm. Take up slack in the cable and then tighten the cable anchor bolt. (Final tightening torque: 55-65 kg-cm). After the cable is anchored, check to be sure there is no more than 5cm of excess cable beyond the anchor bolt. Trim excess cable to length as required and attach a cable end cap to prevent fraying. Crimp the cable end cap into place with pliers or the end of the cable cutters. [Photo 7]

Caution:

Do not change the angle position of the brake arm while pulling the brake cable during installing brake caliper with new pads, otherwise, the brake stroke will be affected and the pad wear range will be reduced.

Step 10 Test the brake by squeezing the brake lever several times to check if the clamping stroke is adequate. The brake pad clearance has been set at the factory. The brake-actuating stroke on the lever end will be about 1-2cm. (recommended). If the clamping stroke is not good (brake actuating position is not correct), the possible reasons are:

1. The brake cable is not fixed tight enough at the anchor bolt on the brake arm.
Solution: Inspect the brake housing to make sure that the cable is secured in the lever and all ferrules are seated properly in the cable guides. Retighten the brake cable.
2. The clearance between pads or the rotor contact pads is incorrect.
Solution: Check the position of the rotor in the slot of the caliper; slowly adjust pad adjuster B and the barrel adjuster on the caliper until you get the preferred brake feeling (pad clearance).

Note:

Braking performance may be less than 100% after the pad break-in period. After the first few rides, re-tension the brake cable to take up the initial cable stretch.

Repair and Maintenance:

Brake Pad Adjustment:

The brake pads will wear during braking, which means the clearance between two pads will increase and brake feel will deteriorate. It might be necessary to adjust the clearance between the two pads by turning the pad adjuster B and the barrel adjusters on the caliper or the brake lever to get the original braking performance.

Step 1 View through the slot of the caliper. Slowly adjust both pad adjuster B and barrel adjuster to change the brake pad clearance. [Photos 5 and 8]

Step 2 Squeeze the brake lever several times to determine the preferred brake lever feel. Be sure rotor is evenly spaced between the two brake pads.

Step 3 Once you get the right brake lever feel (pad clearance), lock the lock nut on the barrel adjuster.

Note:

It is recommended that you use the barrel adjuster on the caliper to make these adjustments. The barrel adjuster on the brake lever is better to be used during riding.

Brake Pad Replacement:

Periodically check the brake pads for wear. When the thickness of brake lining is less than 1.2mm, the pads are worn and must be replaced to ensure continued safe braking.

Tools Required:

- 5mm Allen key
- Pliers

Step 1 Screw the mounting bolts (2 - M6 x 18mm) on the caliper side out the adapter and remove caliper. Turn pad adjusters B left (counterclockwise) to the dead end. [Photo 5]

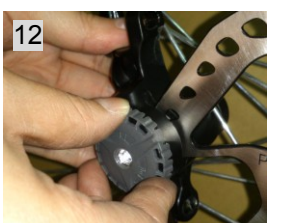
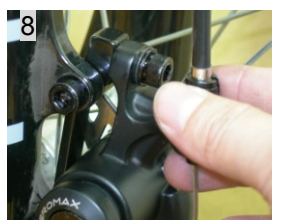
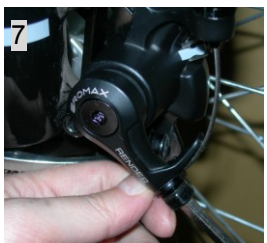
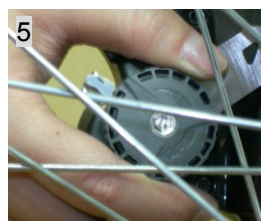
Step 2 Turn both the barrel adjusters on the caliper and on brake lever fully into the caliper anchor and lever body.

Step 3 Pull away the pad return spring with pliers. [Photo 9]

Step 4 Push pad (A side) out through the slot of the caliper with hand first and then push pad (B side) out. [Photos 10 and 11] Clean out the caliper and dispose of the old pads properly.

Step 5 Insert new pads according to the opposite procedure of removing pads and insert pad return spring back.

Step 6 Put caliper into rotor with the slot matching. Turn pad adjuster B right to another dead end till the pads clamp rotor tight. Left turn (counterclockwise) pad adjusters B about 1/5 turn (72°) and get the



right position of pads A and B. [Photo 12 and 13]
Step 7 Reassemble caliper per installation instructions.

Note:

1. Some noise may occur during braking in the rain. It will not affect the brake performance and it will return to normal when the pads are dry.
2. Keep the brake pads away from oil or lubricant, which will seriously reduce the braking power or cause braking failure. Replace the pads immediately when pads are soiled with oil or lubricant.

