ARES 4/8 Hydraulic Disc Brake Installation Instruction

1. General Warning and Precautions:

a. Bengal hydraulic disc brakes are specifically designed for cycling usage. Bengal cannot guarantee product warranty if assembled on alternative transportation modes. Improper installation of Bengal Disc Brakes may cause accidents, so please be cautious.

b. Before riding, please make sure the hydraulic disc brakes are working properly and that the brake pads do not need to be replaced.

* Always wear a helmet when riding.

c. Knowing how to use a hydraulic disc brake system is crucial. Incorrect use can lead to reduced braking power, accidents, and injuries. Ensure you're fully familiar with the correct operation before riding.

d. Bengal hydraulic disc brakes provide superior braking power. Gradually test them on a flat surface to adjust to the braking strength. If sharing your bike, ensure the other person is also familiar with the braking power before riding.

e. Avoid touching the caliper and rotor after riding to prevent burns from post-ride heat. Ensure they cool down before handling, repairing, or adjusting.

f. To prevent abnormal lock system issues, avoid keeping the parking lock engaged for more than a week. Occasionally releasing the park lock button can help avoid malfunction.

g. Consult a qualified technician/mechanic and use the correct tools for all installations or adjustment.

2. Installation & adjustment

Tools required: T25 Torx wrench, 2-3-4-5mm Allen wrench

- **Installation of Rotor**

1) Wipe the rotor and hub surface with alcohol.
2) Install the rotor on the hub's intallation side, ensuring the wheel's rotation matches
3) The arrow's direction on the rotor.
4) Using T25 Torx wrench and tighten the M5 rotor screw in sequence to the hub. Tightening torque: 6~8Nm (53 ~ 71 in.lbs) (FIG.1)

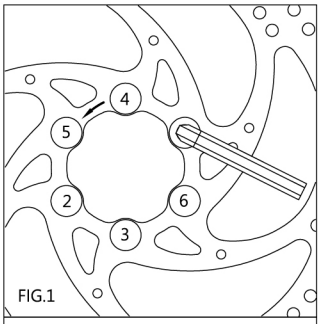

FIG.1

- **Installation of Master cylinder**

1) Tighten M5 screw bolt averagely on handlebar with 4mm hex wrench. Adjust its appropriate angle with position, tighten it to a torque of 4~6Nm (35~53 in. lbs) (FIG.2)

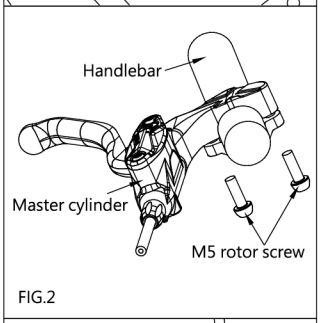

FIG.2

- **Installation of Adaptor**

1) To install the Bengal Hydraulic Disc Brake, place an appropriate adaptor on the front fork or frame using M6 adaptor fixing bolts & washer, at a torque of 8~10Nm (71~89 in. lbs). (FIG.3)

Note: Bengal Hydraulic disc brakes can be mounted on front forks and frames with a 51mm international standard or without an adaptor or for POST mount installation.

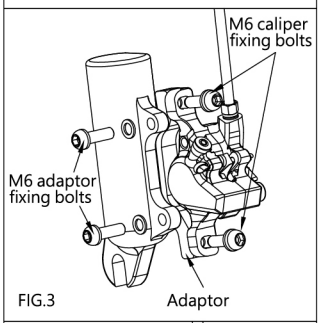

FIG.3

- **Installation of Caliper:**

1) Install the calipers on the adaptor by M6 caliper fixing bolts with washer loosely and let calipers be able to swivel left and right for adjusting its position. (As shown in FIG. 3)

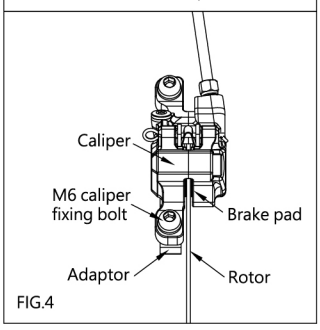

FIG.4

- **Adjustment of disk brake position**

1) Hold the lever after operating several times, make the caliper clamp the disc and adjust the position to the middle of the disc (FIG.4), tighten M6 caliper fixing bolts at a torque of 8~10 Nm (71~89 in. lbs).
2) Check for any noise or abnormal friction by turning the wheel. If detected, loosen M6 caliper fixing bolts, repeat the wheel turn, and adjust the caliper position until it turns freely without friction noise. (See FIG.4)

Adjust the holding space between the lever to fit your personal choice by using a 2mm hex wrench. (FIG.5)

Note: It is recommended to test the braking system at low speed before going at higher speeds.

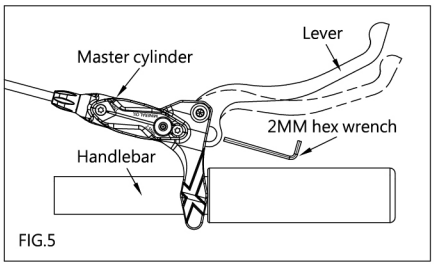

FIG.5

3. REMOVING THE PADS

Keep pads and rotor clean, free from oil or hydraulic fluid. Replace contaminated pads with new ones. Brake pads are formulated for optimal use with the BENGAL hydraulic disc brake system.

- Removing the brake pads

1) Loosen the caliper fixing bolts and take off the calipers.
2) (FIG.6) Remove pins to dislodge brake pads and spring.
   (FIG.7) Remove the 3mm pins holding the hydraulic disc brake pads and spring. First, take out the small Ω-shaped spring pin, then unscrew and remove the cotter pin screw.
3) It is suggested to push brake pads and spring gently with an Allen key.

- Installing the brake pads

1) Position brake pad and spring to correct direction. (FIG.6) (FIG.7)
2) Install brake pads and spring in the caliper, aligning with the pinhole (see FIG.6). Use a cotter pin, bend its longest end 45 degrees to secure it (see FIG.7), or insert a 3mm pin bolt and tighten with a 3mm Allen wrench, applying 3~5 Nm torque (26~4 in. lbs).

NOTE:

1) New pads require about 10 full stops to achieve their optimum braking power.
2) When worn out to 2.5mm, change to new pads.

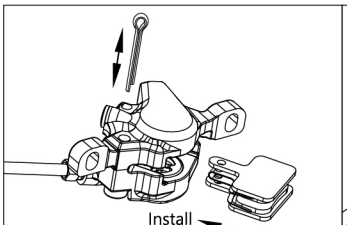

FIG.6

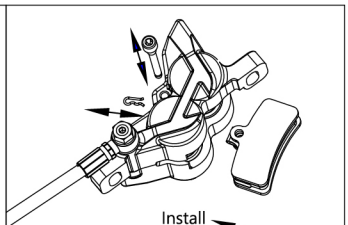

FIG.7

4. Caution of adding brake oil and replacement

a. If levers work loosely but still brake, it might be due to insufficient brake oil. Ensure levers are tight after adding oil.
b. In order to maintain braking performance, brake oil should be replaced once a year.
c. The ARES series uses MINERAL brake oil only. (Do not mix with any other braking oil)
d. Avoid oil contact with brake pads, body, or other parts during oil replacement. If oil accidentally touches your body, clean it with alcohol. Wipe clean brake oil if it touches other brake parts.
e. Properly dispose of the used brake oil.

5. Others Cautionary Measures

If you see "5.0mm Pad" and/or "2.3mm rotor only" on your hydraulic disc brake calipers (FIG.8), replace the brake pads and rotors according to the original setup for each model. More details on 2.3mm rotors and 5.0mm pads can be found on the BENGAL website.

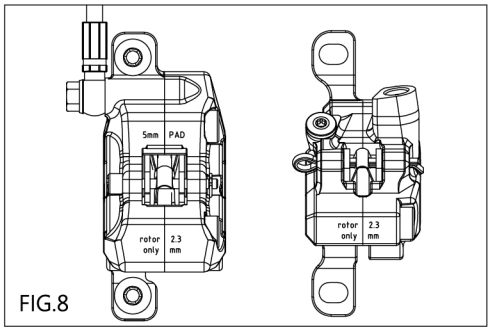

FIG.8

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.

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