# Instructions for installing BMW replacement outer ring

Thank you for purchasing this Moto-Master quality product! Moto-Master represents one of the finest lines of replacement and high performance brake systems available. Please read this step by step instruction to replace a BMW outer ring with Moto-Master brake disc 111076/111077 carefully and keep these instructions as they are part of the product.

#### Step 1:

Remove the brake disc from the bike and place on a flat, clean surface.



### Step 2:

Remove the rivets from the brake disc with care. This can be done with a small axle grinder or by drilling. Make sure not to damage the inner ring itself. When using an axle grinder, only grind on the side of the outer ring like pictured below.



Correct way: grind on side of the outer ring.



Wrong way: grind on the side of the inner ring.

#### Step 3:

Clean the inner ring, with special care for the mounting surface for the new outer ring and mounting surface on the bike. This will ensure all components will have a flat and clean contact area. After cleaning, position the Moto-Master outer ring on the inner ring and align the mounting holes. Note: the side with the counter bore should be positioned up like in the picture below:



#### Step 4:

Measure the thickness of the inner ring at the mounting holes. When the thickness is max. 7 mm, the short bolts are needed to mount the disc. When the thickness of the inner ring is between 7 and 11mm, the long bolts are needed to fit the outer ring to the inner ring. Place a flat washer between the inner ring and the nut. The correct assembly should be: Bolt > Outer ring > Inner ring > Flat washer > Nut.

Torque tighten all <u>NUTS</u> to 6 Nm in a crisscross tightening sequence. Don't torque the bolts, because they are self-locking and won't give you the correct preload on the bolt.



Measure the thickness of the inner ring



 ${\sf Bolt} > {\sf Outer\ ring} > {\sf Inner\ ring} > \dots$ 



... > Flat washer > Nut. Torque tighten the nut to 6 Nm.

## Step 5:

Consider cleaning all components of the brake system now they are all easy to access. Replace worn parts if needed.

Reinstall the brake disc to the wheel/bike. Follow the instruction manual guidelines of your bike and use the specified torque values for all bolts. Always install new brake pads when replacing a brake disc. Ensure to bed in the new brake disc and pads, for instruction of bedding in motorcycle brakes, please check <a href="https://www.moto-master.com">www.moto-master.com</a> and go to the download area of the site.

