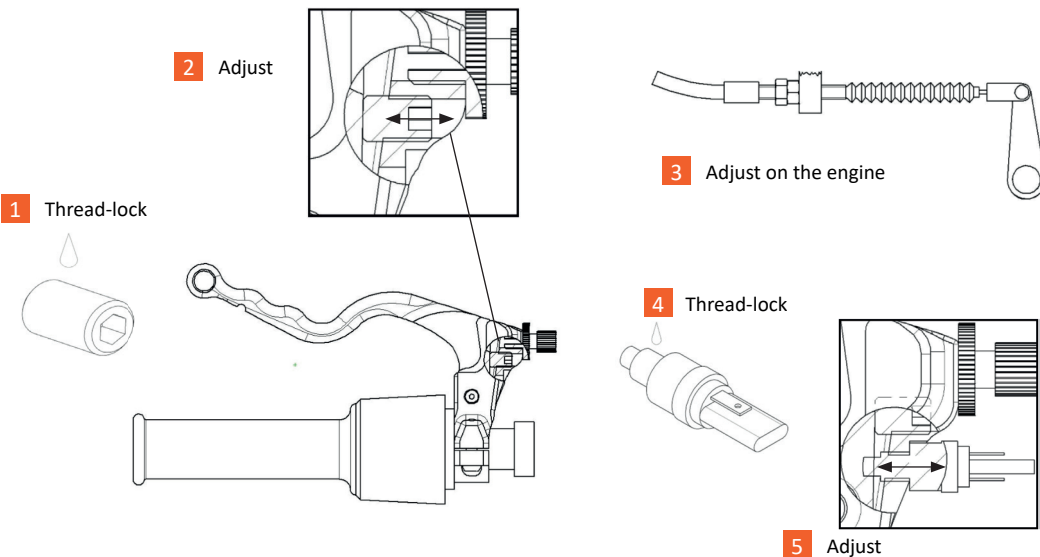


CABLE CLUTCH INSTALLATION AND UTILISATION

1. Remove the previous system.
2. Install the BERINGER cable clutch (see above instructions concerning the hydraulic master cylinder).
3. Connect the cable.
4. Adjust the lever clearance so that the cable is free when the lever is released.



MOUNTING INSTRUCTIONS FOR REAR MASTER CYLINDER MC 12.7

This oscillating master cylinder is entirely mounted with rod ends (aircraft quality).

1. Check pedal position, the boot must NOT touch the pedal.
2. If necessary, adjust the pedal position by screwing/unscrewing the ball end.
3. Block the locknut.

WARNING Check that the pedal and the piston fully come back in the initial position after pushing.



ARE NOT COVERED BY THE 1 YEAR WARRANTY

- Any use in competition or outside the specified requirements.
- Any disassembly of our products outside the Beringer workshop.
- Normal wear, colour ageing, and chromed finish.
- Any use with a product other than DOT4.

The best brake is the one properly adapted to the use you want.
We stay any time at your disposal for a specific or a race use. Contact us!

Brakes are safety parts. You must **read this entirely and respect the instructions** for mounting and use. You must also **absolutely keep these instructions**, even after the expiry date of the warranty.

DATE
INSPECTOR

DISC INSTALLATION AND UTILISATION

1. Firstly, don't damage the original screws and bolts by removing the old discs.
2. Check that the discs correspond to the original ones (diameters, holes and offset).
3. Clean the area where the discs are fixed and make sure that there is no deformation (maximum 0.02 mm).

WARNING A DEFORMED WHEEL LEADS TO A DEFORMATION OF THE DISC.



4. Remove any block or washers.
5. Tighten the screws, proceeding gradually, in diagonal sequence (use thread locking compound), to the specified torque values:
M5 : 0.6 daN.m (4,3 foot-pounds) M6 : 1 daN.m (7,3 foot-pounds) M8 : 2,5 daN.m (18,1 foot-pounds)
6. The disc must be centered in relation to the caliper. It mustn't rub on either side of the caliper or on its outer diameter.
7. AERONAL DISC: you **absolutely** have to respect the rotation direction (arrow on the external face of the disc).
8. Check that the disc rotates freely: there must be a 2mm clearance between the disc and any other part (for example, the caliper fixing screws on the fork).
9. PADS:
 - with original calipers : use the BERINGER® corresponding pads.
 - with BERINGER 6 piston AEROTEC® calipers, use BERINGER® pads Ref: 1100S (road use) / 1100R2T (racing use).
 - with BERINGER 4 piston axial calipers, use BERINGER® pads Ref: 2654S (road use) / 2654R2T (racing use).
 - with BERINGER 4 piston radial AEROTEC® calipers, use BERINGER® pads Ref: 1200S (highway) / 1200R2T (race).
10. It's dangerous not to install the recommended pads, either in BERINGER calipers or original calipers.

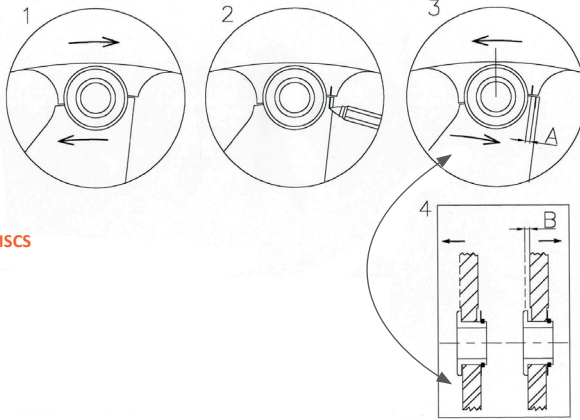
N.B In some cases, notably CBR1000 DUAL, VFR-87, 660 XTZ etc... it is necessary to slightly grind the caliper support plate in order to leave a sufficient clearance (≥1mm) with the disc and the bushes. Indeed, to improve performance, BERINGER discs are thicker than the original discs and often floating.

To obtain best results from the braking power and durability (min. thickness 5 mm) of BERINGER® cast iron brake discs. Discs and pads must be run-in (fixed, floating, drilled or smooth) for 100 to 300 km. Using braking power gradually, **without excessively** heating the discs (avoid violent, repeated or continuous braking). A **perfectly smooth** surface on the discs will indicate that the running period is over.

CAUTION The first braking operations must be very light. They are intended to remove the protective coating from the disc. If this instruction is not followed, there is a risk of premature damage to the brake pads and discs (vibrations) which is not covered by the warranty. During the running-in phase, the braking power is temporarily reduced.

11. Use brake pads adapted to your style of riding: after the replacement of the pads, you must apply the instructions of the following chapter : 'Installation and utilisation of calipers'.
12. Don't forget the running in, after each pads change.
13. Regularly check the surface condition of the discs: they should be shiny or even blue or dark brown. If the surface becomes matt (as if sanded with sandpaper), there is a risk of premature wear of the brake discs and pads. This can happen in case of repeated use with very low braking or in the rain. It's therefore advisable to perform a few hard braking operations in order to re-plastify the pads.
14. Never use solvents, brake cleaners, basic chemicals, weedkillers or pressure washers to clean the discs. Use soapy water. Rinse with clean water without pressure.

Chrome finish: Some models are delivered with chrome finition. The use of this coating is reserved for an episodic use of the motorcycle. Under no circumstances should water or corrosive products (e.g. de-icing salt) be allowed to stagnate on the chrome, as this would invalidate the warranty. Also, chips due to gravel are not covered by the warranty.



MAXIMUM WEAR OF BERINGER BRAKE DISCS

Hub gap:

- A < 1.5mm : OK
- A > 1.5mm or B > 3mm: REPLACE THE HUB
- A > 2mm: **STOP !**

Thickness of the rotor: 5mm minimum

ASSEMBLY AND USE INSTRUCTIONS FOR CALIPERS

BERINGER calipers are mounted in place of the original calipers without any adaptation kit (except special kits). However, some calipers are delivered with blocks to compensate for a possible lack of precision in the machining of the fork pockets. BERINGER 6-piston calipers require perfect alignment with the discs.



The following points must be observed during installation:

- The thread of the fixing screws (use threadlocker) must bite completely into the thread of the calipers but without protruding in order to not touch the discs.

Tightening torques: M10 : 4 daN.m. (29 foot-pounds) M8 : 2.5 daN.m (18,1 foot-pounds)

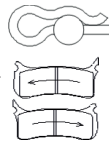
- The disc must be centered in relation to the caliper. It mustn't rub on either side of the caliper or on its outer diameter.
- Use **only DOT 4** brake fluid. Never use non-mineral silicone «racing» fluid (non-miscible).
- For a perfect bleeding, it is preferable to dismantle the caliper, to insert a wedge between the pads, to orientate it in all the positions and to tap it slightly in order to make go up all the air bubbles towards the bleeders

Tightening torques: bleed nipple: 1 daN.m (7.5 foot-pounds) feeding screw: 1.7 daN.m (12,7 foot-pounds)

- You must bleed the master-cylinder (even if it has not been changed).
- After been pushed down, the piston of the master-cylinder must come back quickly, entirely, freely and smoothly in its maximum up position of rest in order to bring the brake system to atmospheric pressure.

7. Pads replacement:

- Remove the used pads
- Clean the pistons carefully with a dry and not linty cloth
- Push down the cleaned pistons in their housing
- Put the new pads and run-in them following the instructions above.
- Axial 2 and 4-piston calipers: make sure that the beta pins are fully inserted in the retaining pins of the inserts.
- Radial 4 and 6-piston AEROTEC® caliper : unscrew the guide screw, replace the pads (take care of rotating side), put thread lock compound on the screw, tighten to 1,2 daN.m (8,6 foot-pounds).



CAUTION! From now on, any action on the brake lever will cause a very significant deceleration of the motorcycle. The BERINGER company declines all responsibility in case of non-control of the braking power.

8. Never use solvents, brake cleaners, basic chemicals, weedkillers or pressure washers to clean the caliper. Use soapy water. Rinse with clean water without pressure. Do not blow out the calipers with compressed air.

9. You must change your brake fluid at least every two years (normal use) or after each race (racing conditions) with **approved DOT 4**.

INSTALLATION AND USE INSTRUCTIONS FOR HYDRAULIC MASTER CYLINDERS

- Carefully remove the existing master cylinder without introducing air into the calipers.
- Install the Aerotec® master cylinder, adjusting its position to the optimum lever grip position (the distance between them can be adjusted with the spinner) and tighten the 2 screws moderately.
- Connect the hose(s) from the calipers to the bleeding screw of the master cylinder.
- Connect the brake fluid reservoir supply hose with a safety clamp.
- Turn the handlebars from right to left to make sure that:
 - The Aerotec® master cylinder does not come into contact with motorcycle components (cables, dashboard, fairing, etc.).
 - The hose(s) mustn't (in any case) pull the body of the master cylinder.
 - The supply hose is not clamped and allows the atmospheric pressure of the master cylinder.
- Unscrew the fixing screws and position the master cylinder so as to facilitate the ascent of the air bubbles towards the bleeder. Tighten moderately.
- Tighten the bleeding screw with the recommended torque 1.7 daN.m (12,7 foot-pounds).
- Bleed the master cylinder with the bleed screw using **only DOT 4** brake fluid coming from a new and closed container. Don't use any other 'racing' silicon fluid (non miscible).
- With the bleeder open, push the brake pads back in by turning the master cylinder to dislodge any bubbles from the banjo fittings.
- To obtain a perfect bleed, it's better to remove the master cylinder from the handlebar, to rotate it in all the possible positions and to tap it slightly to allow any small air bubble to move up to the bleed screw.
- It's imperative that no air bubble remain in the braking system.
- Screw the bleed screw with the recommended torque 1 daN.m (7.5 foot-pounds), adjust properly the position of the master cylinder and screw the fixing bolts with the recommended torque: 1 daN.m (7,5 foot-pounds).
- After depressing it, the master cylinder piston must return quickly, completely, freely and smoothly to its maximum rest position in order to bring the brake system to atmospheric pressure.
- If you push on one piston of the caliper, the braking fluid level must go up in the reservoir of the master cylinder.
- Replace the brake fluid at least every two years (normal use of the motorbike) or after each race (competition) and use **homo-logated DOT4** coming from a new and closed container. Don't use any other 'racing' silicon fluid (non miscible).

TO ADJUST THE LEVER

