



A brand of Trickstuff GmbH

Disc Brake CLEG4

Manual

Installation, Service, and Warranty



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1. Introduction to this Manual

We are happy you went for the use of the CLEG4 disc brake and we hope you will enjoy your cycling tours. We kindly ask you to read this manual thoroughly before installing your brake and going on your first ride.

This manual is supposed to give you all information you need to be able to carry out the installation as well as normal service and some repairs. For the most part, installation and service can be carried out without special-purpose tools.

2. Regular Inspections for your Safety

In case of correct installation, the CLEG4 works over a longer period of time without the need for service. However, the system should be checked on a regular basis if usage frequently occurs under difficult conditions. Please check all bolt connections with a torque wrench (the correct torque is given in the instructions), check the hydraulic system for leaks as well as the wear of the brake pads and disc rotors. Beware after a fall: Check the braking system thoroughly before continuing your ride. **Under no circumstances are you to go on after falling if you detect damages to the braking system (e.g. leaking brake fluid)!**

3. No Restrictions?

In principle, the CLEG4 is registered for bicycles only, especially mountain bikes. The authorization also applies to its use in races. The use of CLEG4 brakes on a tandem is not permitted.

Fundamentally, the diameter of the disc rotors used has to be adjusted according to intended use and total weight of cyclist and bike. Light-weight rotors and small disc rotors, for instance with a diameter of 160 millimeters in the front/140 in the rear, should be used by lighter cyclists only. If total weight of cyclist and bike amounts to more than 100 kilograms, we recommend using disc rotors with a diameter of at least 180 millimeters (front and rear) so as to avoid an overheating of the braking system when used on steep downhill.



4. Watch out!

When braking, the friction between brake pads and disc rotor converts the kinetic energy of cyclist and bike into thermal energy. Brake caliper and disc rotor heat up every time the brakes are applied. As a result, the temperature of the disc rotor can get extremely high. Therefore, you should neither touch the brake caliper nor the disc rotor during or shortly after the ride because there is a risk of being burned. Please check carefully whether the components have cooled down sufficiently before working on the braking system.

We recommend using organic brake pads only. Sintered brake pads result in a high thermal strain on the braking system, are prone to squeaking, and wear out the disc rotors more severely.

The CLEG4 is designed for the use with DOT brake fluid. Thus, you should only use brake fluid of the type DOT 4 or 5.1 (commercially available for motor vehicle need) or Super Formula by Trickstuff-Ferodo. Never use other media (such as of the type DOT 5 or mineral oil) as they destroy the seal of the braking system which results in the brakes being unusable.

Use new brake fluid only. You must not reuse drained fluid. Fluid that has already been used can contain larger amounts of bound water. This entails the danger of vapor bubbles forming in the braking system which might result in reduced braking function.

Thus, you should prevent water or bubbles from getting into the system so as to avoid the forming of vapor bubbles inside. Please be especially careful when bleeding the braking system.

Constant braking under extreme conditions may lead to the brake heating up to a point at which brake efficiency is diminished. Therefore, you should keep on releasing the brake briefly during long slopes—giving it the opportunity to cool down a bit.

Disc brakes produce very high deceleration values even if you pull the brake lever only slightly. Thus, you should carefully familiarize yourself with the way your brake works to avoid the risk of falling that may arise from wrong handling. Please practise correct braking before going on a ride with your bicycle.

In order to reach maximum brake efficiency, your brake has to be bed in gently by braking about 20 times from a speed of 30 km/h to 10 km/h.

Brake pads and disc rotors should never come into contact with grease or oil. Before replacing the pads, you should push back the pistons into the housing carefully using a flat tool. After installing of the new brake pads, please pull the brake lever several times until a firm pressure point sets in.

Before installing the components, read the instructions carefully.

Loose, worn-out or damaged components constitute a risk of injury to the cyclist. For repairs and replacement of components, use only original parts by Trickstuff.

5. Installation instructions



If the wheel is removed, the brakes are not to be applied. Otherwise, the pistons are pushed together too closely and the wheel with the disc rotor can't be installed. If the brakes are applied repeatedly with braking pads missing, the pistons might extend far from the brake caliper which can result in the leakage of brake fluid. In this case, the system has to be filled and bled anew.

If the pistons are extended too far, use the Triple-B-Tool by Trickstuff or the "woodenpistonpushbacktool", a flat hardwood, (if needed you can carefully use a flat screwdriver) to force them back. The force you apply is supposed to take an equal effect on the pistons to prevent them from tilting. If one of the pistons was forced back askew, the piston or its seal could be damaged which would result in the failure of the brake. Also, you should be able to force back the pistons without too much effort. If you feel resistance, don't apply more force but check whether the piston is tilted and, if necessary, start over.

In case brake pads are already installed, please make sure that they don't come into contact with oil or grease. If the filling level in the reservoir is too high, it is possible that the pistons can't be pushed back entirely. Slightly loosen up the bleed screw on the housing of the Brake Master Cylinder (= BMC) and drain of superfluous brake fluid. After making sure all air has been purged from the system, tighten the bleed screw again.

When cleaning the braking system you should use a sufficient amount of clean tap water or a dry towel. Never use brake cleanser as usually used for motor vehicles—it would damage the seals of the braking system. In general, disc rotors and brake pads purge themselves from normal dirt, e.g. mud, during the braking process.

Be careful when dealing with brake fluid. Brake efficiency is considerably reduced if the disc rotors or brake pads are soiled with brake fluid. Brake pads become useless after coming into contact with brake fluid and, thus, need to be replaced. If there is a film of brake fluid on the disc rotor, you can wash it off using a large amount of water and dish soap, acetone, or isopropyl alcohol.



5.1. Handling of Brake Fluid

- Wear protective goggles and gloves during the handling of brake fluid. Eye contact can result in irritation. After contact with the eyes, rinse the eyes immediately with plenty of water for several minutes and consult an eye doctor.
- Use protective gloves. Physical contact can cause irritation and nausea. After physical contact, immediately wash off the brake fluid with running water. In case of occurring skin irritation, consult a doctor.
- Inhaling of fumes or vapors produced by the brake fluid may result in nausea. Avoid direct inhalation and look for sufficient ventilation of your workplace. In case of nausea caused by inhalation of vapors, immediately move to fresh air and consult a doctor.
- Never drink it! Danger of poisoning! Throw up swallowed brake fluid immediately and consult a doctor.
- Store the fluid out of the reach of children.
- Be careful during the handling of containers with brake fluid. Use a suitable space for storing. Keep the container tightly closed as long as possible.

5.2. Disposal of Old and Used Brake Fluid

Act strictly in accordance with regional and governmental regulations and laws when disposing of brake fluid. Under no circumstances is brake fluid to get into the sewers or into natural waters!

5.3. Turning the bike upside down

In rare cases, there could be bubbles in the reservoir of the BMC if the braking system hasn't been bled completely or after usage over a longer period of time. If that's the case, there is the slight—as well as inconvenient—possibility of these bubbles getting into the high pressure area of the hydraulic system when the bike is being turned upside down. This results in the function of the brake being diminished. Therefore, you should check the braking function by actuating the brake lever several times after having turned upside down the bike. If there is no normal brake reaction, the brake has to be adjusted as follows: In case of bad response to actuating the brake lever (soft pressure point):

Set the bike slightly on its rear wheel so that the piston axis inclines. Slowly actuate the brake lever several times in order for the bubbles to return to the reservoir. Then bleed the brake to remove the bubbles from the reservoir.

If the response of the brake doesn't improve, the brake needs to be bled anyway (see section "Filling/Refilling of Brake Fluid and Bleeding").

6. Installation

Important note: Assemble disc brakes with suitable components only! Be careful with light-weight forks. Not every fork is able to cope with the strain that stems from a disc brake in the long run. We recommend the use of spoked wheels with 32 steel spokes—with spoking that is crossed 3 times—and special Disc rim. Wheels with a radial lacing are not permitted!

i For installation, you should use suitable tools that are as good as new only!

6.1. Installing disc rotors

⚡ Tools: Torx TX 25/ low-strength threadlocker

i Make sure the friction ring of the disc rotor doesn't get greasy during installation.
Wear gloves.

1. Align the disc rotor to the flange and attach the provided screws. You need to install the disc rotor so that the spokes are burdened by applying pressure.
2. Use liquid low-strength threadlocker (e.g. Loctite 222). If you assemble the screws without threadlocker, there is a danger they might loosen during use.
3. Tighten the screws for securing the disc rotors in opposite diagonal pairs. Use an adjustable torque wrench.

*Torque: Steel bolts and titanium screws: 6 N, aluminium screws: 4 Nm max.
203mm rotors: Steel bolts and titanium screws: 8Nm,
aluminum screws: **Not permitted!***

6.2. Installing brake levers

⚡ Tools: Allen key of type 2.5

i Make sure that the size of your handlebar fits the CLEG brake lever (CLEG levers are made for installing on handlebars with 22.2 mm +/- 0.07 mm diameter only).

1. Remove handle bar plugs and rubber grips.
2. Release the fixation on the BMC until you are able to slightly slide the BMC over the handle bars. For that you have to loosen both fixing bolts on the upper side of the BMC.
3. Adjust the BMC in a way so that you can easily reach the BMC from your usual position on the handle bar both with your index finger and middle finger.
 - Make sure that the BMC does not interfere with the actuation of the shift lever. BMCs by CLEG are compatible with common shift levers by the established manufacturers (Shimano, SRAM).
 - Fasten both fixing bolts on the adjusted brake handle until both BMCs do not shift from their position whenever the brakes are actuated in a normal way. However, the positioning of the BMC should not be completely fixated so they

can still eschew in case of a fall which is important to prevent them from getting irreparably damaged (the same applies to both shift levers).

- The fixation of the BMC by CLEG is designed in a way that the fixing bolts have to be tightened just slightly in order to firmly clip the BMC to the handle bar.

Please do not tighten the fixing bolts too much to avoid damaging the fixation.

4. Adjust the reach of the brake levers so that you can easily reach the brake levers from your usual position on the handle. In order to do that you have to twist the Allen screw (2-millimeter) on the brake lever until it is in the right position. The small white polyamide deadlock prevents the adjustment from unfastening by itself.



The brake levers should be positioned in a way so that you can still pull a full braking without touching the handle bars.

6.3. Installing brake calipers



Tools: Allen key of type SW 5/low-strength threadlocker



Please use the screws that are included in the delivery and/or steel bolts of similar quality for the assembly.

Torque of the screws for fastening the brake calipers: 6 Nm

1. Apply the wheels with the fitted disc rotors to the frame and fork.
 - Make sure that the wheels sit tightly in the dropouts for them not to adjust their position later on.
2. Fit the brake caliper with the assembled brake pads to the disc and adjust it centrally over the disc rotor so that the left and the right light slots between brake pads and the disc rotor are the same size.
 - Choose screws that are suitable for the assembly. Included in the delivery are screws with a length of 16 and 20 millimeters. Please always put a washer underneath the screw head!
3. Fasten the screws. Use a low-strength threadlocker for assembly (e.g. Loctite 222).
Tightening torque: 6Nm

6.4. Brake hoses




Tools: 2 wrenches of type 8


If requested, we can deliver the CLEG4 brakes with brake hoses cut to length according to customer wishes.

The standard brake hoses are provided with screwed fittings on the BMC side so that the hose can be shortened on that side. Please make sure that you use copper rings to put underneath for sealing (there is an indentation for the sealing ring on the brake lever) and assemble the brake hose with the provided hollow screw to the caliper or screw the fitting directly to the drilling of the BMC.

7. Maintenance

7.1. Bleeding/ Filling the brake

 *Tools: Allen key of type 2.5/Torx T10/Bleeding kit*

 Only use brake fluid of the types DOT 4, DOT 5.1, or Super Formula by Trickstuff-Ferodo, never use fluid of the type DOT 5 or mineral oil!

4. Put the bicycle into a work stand. Align the bike so that the BMC is at the highest point.
5. Remove the wheels.
6. If brake pads are already assembled, use either the Triple-B-Tool by Trickstuff or a flat screwdriver free of grease to push back the pistons into the brake caliper. Afterwards, remove the brake pads to prevent them from being contaminated by brake fluid. For the pistons not to be pumped out accidentally, you absolutely have to insert a bleed block (best choice: the steel bleed block by Trickstuff!) into the brake pad chamber.
7. Loosen the BMC clamp and adjust the BMC into a slightly upwards position.
8. Preparation of two syringes: Fit a hose as well as the M5-nipple to one syringe, a hose and the M5-nipple to the other syringe. Fill up about half of both syringes with brake fluid. Make sure they are free from air.
9. Remove one of the brake calipers and turn it by 90 degrees so that the bleeder hole points upwards horizontally. Remove the bleed screw of the brake caliper. Next, fill the bleeder hole up to its brim with a small drop of brake fluid and screw in the half-filled syringe with the M5-bleeder-nipple. Don't let air get underneath the nipple.
10. Remove the bleed screw on the BMC and screw in the half-filled syringe with the M5-nipple without getting air underneath the nipple.
11. Actuate the brake lever slightly several times. While doing so, bubbles sticking to the BMC piston might get into the reservoir. Don't actuate the brake lever from now on!
12. In the next step, carefully push the brake fluid upwards (brake lever) with the lower syringe (on the brake caliper) until it's almost empty. In doing so, hold both syringes upwards, if possible, so that escaping bubbles can be caught in the syringes and don't get pushed back into the system. Now pump back the fluid from the upper syringe to the lower one until the upper syringe is almost empty.
13. Thus, pump the brake fluid back and forth until no bubbles emerge anymore. Now and then, possible remains of air can be sucked from the brake caliper by pulling on the lower syringe.
14. As soon as bubbles stop emerging, remove the syringe from the BMC and assemble the M5 bleed screw. Make sure that no bubble slips in underneath the screw (if needed you can push a little bit of fluid from the bottom to the top again to make sure that there is no air underneath the bleed screw). Tighten the bleed screw carefully. Absorb leaked brake fluid with a tissue.



15. Remove the syringe including the nipple from the brake caliper (the bleeding hole should once again point upwards!), fill a drop of fluid into the open hole and screw in the bleed screw. Important: There mustn't get air underneath the screw!
Torque: 3 Nm. In doing so, the O-ring underneath the head of the bleed screw is cut as planned.
16. Wipe the system temporarily.
17. Check the pressure point while the bleed block is still installed. If it's clearly defined, assemble the brake caliper, brake pads, and the wheel. Pump the pads to the disc rotor. Adjust the brake caliper perfectly. After doing so, a firm pressure point should set in. If not, repeat the procedure.
18. Take the bike from the workstand and check the braking system for normal function. Check for signs of leakage.
19. Wash the bike, especially the braking system, with a large amount of clean water.
20. Adjust both brake calipers so that they don't grind.

7.2. Brake fluid replacement

- i** We recommend a yearly replacement of the fluid. Use brake fluid of the type DOT 4, DOT 5.1, or Super Formula by Trickstuff-Ferondo only, never use fluid of the type DOT 5 or mineral oil.

When replacing brake fluid, proceed as described for the bleeding of the brake. When disposing of brake fluid, stick to regional and national regulations and laws. Under no circumstances is brake fluid to get into the sewers or into natural waters!

7.3. Replacing brake pads

 *Tools: Allen key of type 2.5*

- i** We recommend using organic brake pads only. Sintered brake pads result in a high thermal strain on the braking system, are prone to squeaking, and wear out the disc rotors more severely.



Never wear down the brake pads to the back plate. Friction material on the pads should always have a minimum thickness of 0.5 millimeters for safety reasons. Check the condition of your brake pads periodically! As soon as the pads fall below the minimum thickness they need to be replaced.

- i** Brake pads of all CLEG4 disc brakes adjust automatically with progressing wear and tear. In doing so, the pistons move out of the housing of the brake caliper. Therefore, the pistons have to be pushed back into the housing before replacing the brake pads.

1. Leave the old brake pads in the brake caliper and push back the pistons carefully using the Triple-B-Tool by Trickstuff or a flat screwdriver. Make sure to apply pressure on the pistons evenly so that they won't tilt. If a piston is pushed back



askew, it is possible that the piston seal is damaged which results in failure of the brake. You should be able to push back the pistons without using much force. In case of great resistance, don't increase force. Instead, check whether one of the pistons is tilted and, if necessary, start over. If the filling level of brake fluid in the reservoir is too high, you may not be able to push the pistons back completely. In this case, please loosen the bleed screw on the BMC and drain brake fluid.

2. Remove the pad retaining bolt and pull the worn out brake pads out of the brake pad chamber.
3. Insert the new brake pads including the spring into the brake pad chamber and secure them with the appropriate bolt. Before doing so, however, you should put a drop of threadlocker of the type "medium-tight" on the thread of the bolt. Don't let the pads get into contact with grease or oil. Properly tighten the bolt.
4. After replacing the brake pads, actuate the brake lever several times until reaching a firm pressure point. If needed, re-adjust the brake calipers so that they don't grind.
5. Check the normal function of the braking system.
6. In order to achieve optimal brake efficiency of the new brake pads, the brakes need to be bed in gently. For that, do about 20 brakings from a speed of 30 km/h to 10 km/h!

8. Service

This service part is supposed to help you with service and repairs on the CLEG4 disc brakes. Read the instructions carefully and stick to the described process for repairs. Repairs on the hydraulic system should only be undertaken by qualified mechanics with appropriate equipment. Otherwise, the safety of the cyclist could be endangered.

8.1. Troubleshooting

Following chart should help you with the search for the cause of a possible defect on the braking system and provide you with a possible solution.

| Problem | Possible Cause | Corrective Action |
|--|---|---|
| Disc rotor scrapes on the brake pad | Brake caliper isn't aligned centrally | Adjust caliper so that the disc rotor runs through the pads centrally see chapter 6.3 |
| Bent disc rotor | Mechanical or thermal overloading | Straighten disc rotor with Triple-B-Tool If deflection > 1mm: Replace disc rotor |
| | Supporting surface of hub is lathed conically (production defect of hub manufacturer) | Use different hub or brake pads with aluminum spider |



| | | |
|--|--|--|
| Soft pressure point | Bubbles in the system Supporting surface of hub is lathed conically (production defect of hub manufacturer) | Bleed brake see chapter 7.1 Use different hub or brake pads with aluminum spider |
| | Leakage in hydraulic system | Check hydraulic system for leaks and replace component, if necessary (see “Loss of fluid” below) |
| | Disc rotor bent because of “contact with enemy” | Replace disc rotor or straighten with Tripple-B-Tool |
| | Brake pads worn-out unevenly | Replace brake pads see chapter 7.3 |
| | Brake pads worn-out too much and, thus, pistons have corrected too much | Push back pistons, replace brake pads see chapter 7.3 |
| Loss of fluid | Bleed screw on brake caliper leaks | Tighten up screw (3 Nm). If need be, insert new seal see chapter 9.1 |
| | Banjo connection on caliper leaks | Replace O-rings in banjo connection |
| | Connection on BMC leaks | Replace copper washer |
| | Bleed screw on BMC leaks | Carefully tighten up screw. If needed, insert new copper washer |
| | BMC piston leaks | Send in brake: Seals in BMC piston should be replaced (<u>Warning: This should only be done by the manufacturer!</u>) |
| | Caliper piston leaks | Replacing of quad ring(s) in brake caliper (<u>Warning: This should only be done by the manufacturer!</u>) |
| No or insufficient brake efficiency | Worn-out brake pads | Replace brake pads see chapter 7.3 |
| | Glazed brake pads | Replace brake pads see chapter 7.3 |
| | Soiled brake pads | Replace brake pads, clean disc rotor with water/dish soap, isopropyl-alcohol, or acetone see chapter 7.3 |
| Severe development of noise | Brake pads lie on disc rotor at an angle | Center brake caliper above the disc rotor |

| | | |
|-----------------------|---|--|
| | Inconvenient pairing of brake pad and disc rotor | Assemble different pairing |
| | Brake caliper, disc rotor, or wheel not fastened tight enough | Tighten screws or quick release |
| | Tension of spokes not high enough | Tighten spokes |
| “flappy” lever | Bearing bushing has play | Replace bearing bushing and/or lay adjusting washer underneath |
| lever “groans” | Brass nut in lever runs dry | Oil or grease brass nut slightly |

9. Repair work

9.1. Brake caliper repair/ seal replacement



Tools: Allen key of the type 2.5/ 5/ Torx T10 / Wrench 8mm/ toothpick / Compressed Air



These operations should only be conducted by the manufacturer. There is no warranty for full operability in case they are conducted by others!



Please be careful when handling brake fluids. You should always wear safety glasses and gloves. Make sure your work space is well ventilated.

1. Dismantle the brake caliper as well as the BMC from the frame/fork or handlebars.
2. Remove the brake pads.
3. Push the brake pistons outwards (by about 5 millimeters) by “pumping” the brake handle carefully. Make sure that both brake pistons are equally pushed outwards. In case one of the pistons won’t move, hold back the other piston with a flat item and carefully actuate the brake lever again.
4. Dismantle the brake hose from the brake caliper. Be careful: There is the possibility of an outflow of brake fluid. You should also watch out for both O-rings on the banjo connection.
5. Loosen the yoke connection bolt on the brake caliper.
Now you have a front (external) and back (internal) half of the brake caliper.
6. Remove the O-ring from the flute in the back half of the brake caliper. You should use a new O-ring for the assembly of the brake caliper later on, even if the old O-ring still seems undamaged.
7. Unscrew the bleeding screw (Torx T10) from the back half of the brake caliper. Push out the pistons with high pressure air by using a compressor.
8. Take the rectangular rings from the flutes in the halves of the brake caliper and dispose of them. Rectangular rings that have already been implemented must not be used again! In order to remove the rectangular rings you should use a tool from a soft material, e.g. a wooden toothpick. Never use a metal tool as this could damage the coating of the brake caliper.

9. Clean all parts using isopropyl alcohol and carefully blow out the clean parts with the help of compression air. Make sure that there are no residues, dirt, hair or likewise in the brake caliper or on the piston surface as this could cause the pistons to leak.
10. Start the assembly of the brake caliper by applying (new) DOT-brake fluid to the new rectangular rings before inserting them to the flute on the brake caliper. You should also allocate some of the DOT around the flute in the brake caliper.
11. Carefully push the rectangular rings into the flutes on the brake caliper. Make sure that the rectangular rings do not turn inside of the flute and that they fit well all around.
12. Put both halves of the brake caliper on a surface in front of you. The openings of the pistons should point upwards. Completely fill the piston chambers with DOT-brake fluid using a small syringe.
13. Apply DOT-brake fluid all around the scope of the brake piston. This serves as lubricant during the assembly.
14. Carefully push the piston into the piston bore. This should work with low force. Make sure that the force you use has an equal effect on the piston so that the piston does not tilt and the sealing will not be damaged. In case there is high resistance when you push back the piston you should not use force but check whether the piston is tilted and start over again if it actually is. Push the piston all the way into the cylinder bore. Wipe up overflowing brake fluid using a dry cloth.
15. Repeat this process with the other half of the brake caliper.
16. Insert a new O-ring and a new rubber seal (CLEG4 Mk2 only) into the designated flute on the inner half of the brake caliper.
17. Screw together both halves of the brake caliper using the yoke connection bolts.
Tightening torque: 12 Nm
18. Install the brake hose. Use new sealing rings to do that.
19. Now you should wash off all brake fluid from both the brake caliper and the brake pipe. For that, you should use clear water and carefully wipe dry the cleaned parts with a dry cloth. You should never use customary brake cleaner as this could damage parts of the brake system!
20. Bleed the hydraulic system and check the functioning of the brake system.

9.2. Brake lever repair/ seal replacement

 *Tools: Allen key of the type 2/ 2.5/ 5/ Torx T10 / Wrench of the type 8mm / Inclusion tongs for the Seeger ring with a diameter of 12 / Compressed Air*



These operations should only be conducted by the manufacturer. There is no warranty for full operability in case they are conducted by others!



Please be careful when handling brake fluids. You should always wear safety glasses and gloves. Make sure your work space is well-ventilated.



1. Remove the brake caliper as well as the brake lever from the frame/fork or handlebars.
2. Open the reservoir by unscrewing both screws on the upper side of the reservoir and remove the protective cap. After that you also have to remove the membrane that is visible in the reservoir. Please be careful when doing so as you should not damage the very delicate rubber membrane. Do not use any tools with sharp edges to remove the membrane from the reservoir.
3. Use a small syringe to remove the brake fluid from the reservoir. Keep the brake fluid in a suitable container so you can dispose of it in an environmentally responsible way later on.
4. Remove the brake hose from the BMC housing. Be careful so as not to scratch the housing while doing that. Afterwards you should wipe up all of the overflowing brake fluid with a dry towel.
5. Remove the brake lever from the BMC by first unfastening the anchor pin and then unscrewing the bolt for the lever reach from the brass nut in the brake lever.
6. Adjust the BMC so it is turned vertically upwards.
7. Use suitable tongs to remove the Seeger ring on the heads of the brake lever before withdrawing the pushrod bar with the put-on washer.
8. At this point, the BMC piston should get out of the piston bore on its own. Please check the surface of the piston bore and the BMC piston. In case of scratches or striae on the surface, the parts need to be replaced.
 - The piston seals need to be replaced in any case! They have to be replaced by the manufacturer because the replacement requires special equipment.
9. Carefully refine the BMC body and use compressive air to blow it out. Make sure that there are no residues, dirt, hair or likewise on the BMC because this could cause the BMC piston to leak.
10. Put the return spring on the designated bolt on the BMC piston. Use DOT-brake fluid to moisten the sealing around the new BMC piston and – with the return spring – carefully push it into the piston bore. Make sure that the BMC piston does not tilt because this could cause damage to the sealing.
 - You should never use force to do this – usually you should be able to easily push the BMC piston into the piston bore.
11. Insert the pushrod bar with its slightly greased ballhead into the hemispherical notch on the BMC piston. Put the washer onto the rod and secure the BMC piston using the Seeger ring – **it is important you put the sharp edge of the Seeger ring outwards.**
12. Screw the pushrod into the brass nut on the adjustment from below and fasten the brake handle with the anchor pin. Torque 2 Nm.
13. Now you should bring the BMC into a horizontal position.
14. Fit the membrane precisely into the reservoir. Put on the reservoir cap without jamming the membrane and secure with both screws. Carefully fasten the screws.
 - If the membrane visibly curves over the edge of the protective cap, the pressure of the cap is too high and the screws need to be loosened a bit so that the membrane fits equally all around the scope of the cap.
15. Install the brake hose and bleed the hydraulic system.
16. Check the functioning of the brakes.



10. Warranty

This warranty is valid for 24 months (from the date of purchase onwards).

In case of defects concerning the material or workmanship of one of the components of the braking system occurring within this period, Trickstuff GmbH will repair or replace the damaged component free of charge at discretion if provided with the original bill. We try hard to process warranty claims within 30 days after receiving the damaged component (either at an authorized dealer or directly at the Trickstuff GmbH).

1. **Excluded from warranty:** This warranty does not apply to damage attributable to accidents, amendments, and negligence. It also does not apply to incorrect use or misuse, incorrect or inappropriate installation of components, use of components or equipment not explicitly approved by the Trickstuff GmbH, in case necessary repairs have not been undertaken, or if repairs are either executed wrongly or are not authorized. Regular wear arising from the usage of the bike is excluded as well. Furthermore, the warranty does not cover costs that might arise from transport to or from an authorized dealer or from time required to remove the braking system. Compensation for loss of use stemming from time needed for repairs is also excluded.
2. **Buyer:** This warranty holds for the original buyer of the system only and is not valid towards a third party. Buyer's rights in terms of this warranty must not be sold.
3. **Duration:** This warranty is valid for a period of 24 months—starting with the date of purchase—and ends after that period.
4. **Handling:** If you detect damage to your system that is covered by this warranty, immediately contact an authorized dealer or the Trickstuff GmbH. The warranty expires if the brake is used despite evident damage.
5. **Damages:** According to this warranty, the Trickstuff GmbH cannot be held responsible for indirect or consequential damages if the complaint is accounted for using other contracts, illegitimacies or other legal remedies. This applies if not explicitly stipulated within this warranty. Warranties mentioned above are valid exclusively and replace all other legal remedies.
6. **Hint:** For installation, service, and repairs on your braking system always stick to the instructions in the manual provided by Trickstuff.

Caution

If you suspect damage to your braking system covered by this warranty, immediately contact an authorized dealer or the Trickstuff GmbH. Please give a detailed description of your problem or of the detected damage. In case of suspected or detected damage, the braking system must not be used!

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