MANUAL - BRAKE HOSES & FITTINGS

V2023_11

CONTENT

1. General information

1. Read the manual completely before using the products and follow the instructions contained in these instructions when installing, using and maintaining the product in order to avoid personal injury and damage to property.
2. The installation and maintenance of Trickstuff products requires a basic knowledge of handling bicycle components and should only be performed by qualified bicycle mechanics. During installation or maintenance, clean working conditions must be ensured so that dirt entry into the brake systems is avoided.
3. If any of the instructions in this manual are unclear, do not proceed with installation or maintenance. Contact your local dealer or the Trickstuff support-team.

2. Safety

The installation, use and maintenance of Trickstuff products requires that you have read and understood the following safety instructions.

1. General safety instructions

- Always follow the instructions in the manual when working on Trickstuff products.
- We recommend for the use of Trickstuff brakes only Trickstuff products.
- When working on the system, pay attention to appropriate personal protective equipment such as gloves and safety goggles.
- Trickstuff products are to be used exclusively in accordance with their intended use. Otherwise the user assumes the responsibility.

Warning!
Improper installation, use and maintenance of components pose a considerable risk and can lead to accidents with serious injuries including death.

2. Brake pads and brake discs

- Visually inspect the brake pads and rotors before each ride:
  - Worn brake pads and/or brake discs can lead to sudden brake failure.
  - Lubricants such as oil or grease on the brake pad or brake disc can limit the effectiveness of the brake.
  - Corrosion can cause the friction material to detach from the backing plate, resulting in brake failure. Replace brake pads that show signs of rust immediately.
  - Brake pads should not be under a minimum thickness of 0.5mm.

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  - Brake discs must not show any deformations or cracks and must be mounted in the correct direction of rotation.
  - Brake discs must have a minimum thickness of 1.6mm.
- In case of damage to the brake pads and/or brake discs, stop using them immediately and replace them with new brake pads or brake discs.
- Brake pads may only be used with a compatible caliper.
- Before working on brake calipers or brake discs, make sure that they are no longer hot and that the brake discs are no longer spinning. Heat and rotation can cause burns, bruises, cuts and other injuries.
- When installing brake pads, only use the original pad spring, pad retaining bolt and safety clip.
- Check the functionality of the brake after mounting or replacement of brake pads and/or brake discs.

3. Brake

Warning!
If the brake is used with deficiencies it can fail and lead to accidents with serious injuries including death.

- Check the brake before and after each use of your bike and check for damages.
- If there is damage or signs of damage, the brakes must not be used. If in doubt, contact your local dealer or the Trickstuff support-team.
- If the brake leaks oil under high or low pressure, do not continue riding and contact the Trickstuff support-team immediately.
- The brake must be compatible with all parts of the bike. The maximum system weight of the brake must not be exceeded.
- Trickstuff brakes are only as good as the pilot who uses them. Proper braking technique is essential. Improper braking can lead to accidents with serious injuries.
  - Permanent braking should be avoided. When braking, do not drag the brake steadily, but brake in bursts if the ground will allow. Continuous heat input from a permanently dragging brake can cause the brake to overheat, preventing sudden braking and thus leading to serious accidents with risk of injury. Likewise, permanent braking on changing ground conditions such as rolling gravel, wet ground, loam, rocks, road markings, etc. can cause loss of control.
  - Excessive pulling of the front brake can lead to rollover.

3. Tools

Shortening of brake hoses

- Bowden cable pliers or sharp side cutter
- Trickstuff Triple-B-Tool or 3mm Allen key/open-end wrench
- M2,5 bolt (optional)
- Bleed kit tools according to Manual "Bleeding the brake system".

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Assembly/disassembly of fittings

- 6mm open-end wrench
- 8mm open-end wrench (for Goodridge hoses)
- Pointed spike (eg. nail or 5mm and 2mm Allen key)
- Soft-face hammer (optional)
- Assembly grease
- Mounting block (eg. Shimano brake hose clamp)
- Vice

4. Shortening of brake hoses

To shorten the brake hose, only the brake pump needs to be removed from the brake hose. The brake caliper can remain mounted on the brake hose. This procedure has the advantage that only the brake pump, not the entire brake system, needs to be bled again afterwards.

Scenario A: Your brake is already mounted on the bike.

→ Remove the brake pump. The brake caliper can remain mounted on the bike.

Scenario B: Your brake is not yet mounted on the bike.

→ We recommend that you first mount the brake caliper on the bike in order to be able to optimally determine the correct length of the brake hose later.

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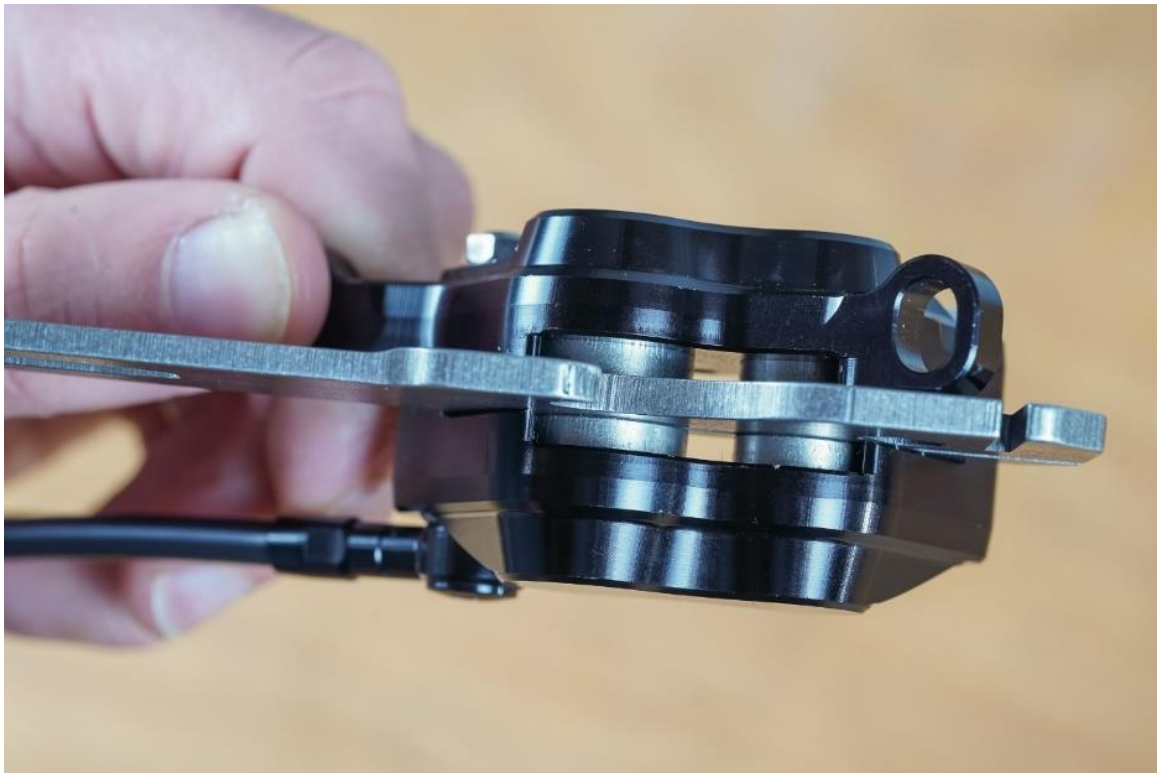
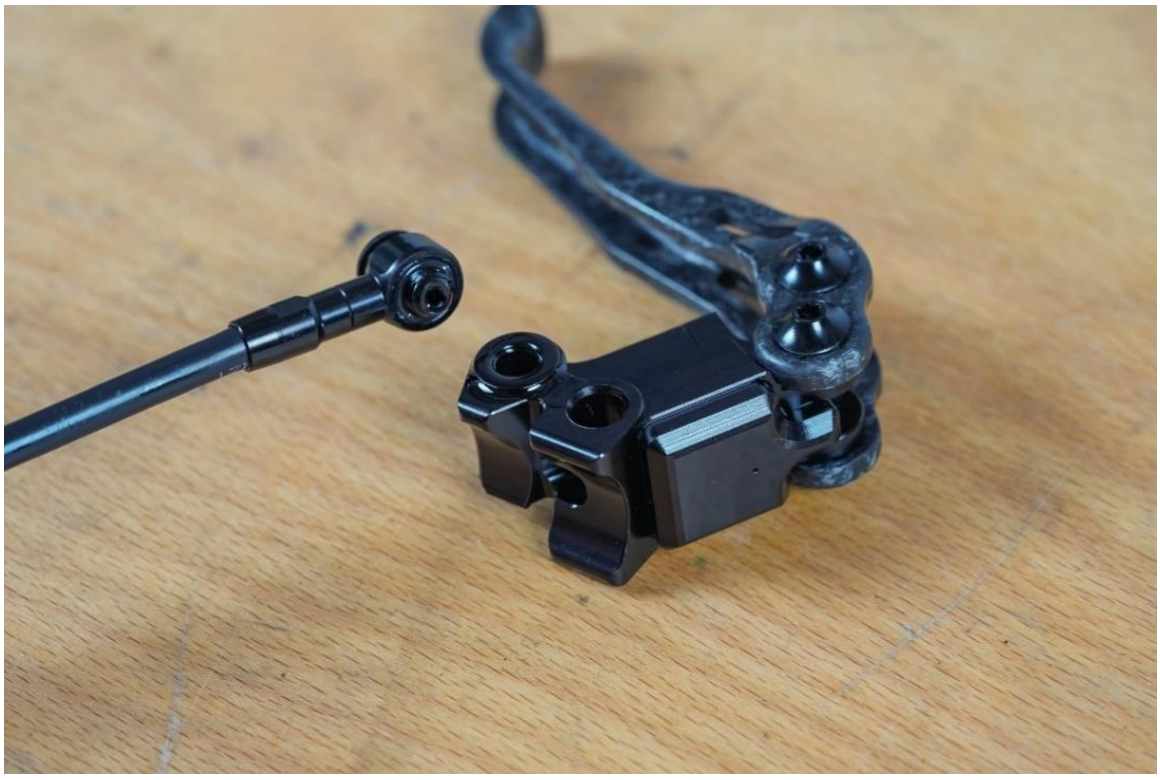
1. Remove the brake pads from the brake caliper.
2. Place a Trickstuff Triple-B-Tool or alternatively a 3mm Allen key/open-end wrench between the caliper pistons.



3. Pump the caliper pistons onto the Triple-B-Tool or the 3mm Allen key/open-end wrench. The pistons must not fall out of the brake caliper.
4. Remove the brake hose from the brake pump (see "5. Assembly and disassembly of fittings").



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Note: Make sure that you do not shake the brake hose too much after removing the brake pump to prevent the brake oil from leaking.

5. For internal routing, you will have to remove the fitting from the hose. Close the opening of the hose, e.g. with the M2.5 screw included in the bleed kit, to prevent the brake oil from leaking into the frame, and route the line through the frame.

6. Cut the brake hose to the required length using a Bowden cable pliers or a sharp side cutter. The brake hose must be shortened by at least 5mm in order to be able to crimp the fittings correctly again.

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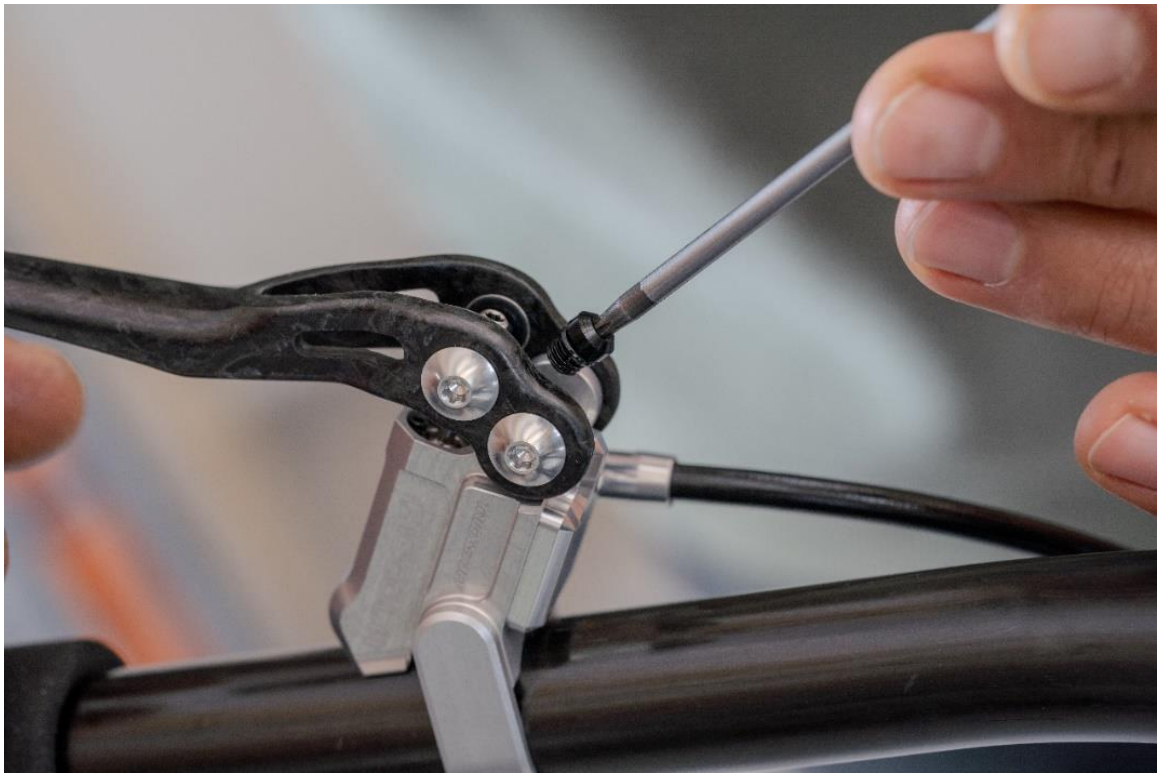
Note: The brake hose must remain long enough to prevent it from breaking or coming under tension in the event of a crash with the handlebars fully twisted.

7. Mount the fittings as described in point 5 (see "Assembly and disassembly of fittings") and connect the brake hose to the brake pump.
8. Bleed the brake pump, proceed as described below:
    a. Position the brake pump with the bleeding opening facing upwards.
    b. Fill a syringe a third full of brake oil without air and connect the appropriate fittings for your brake system: M4 (DRT/MXA) / M5 (PCA).
    c. Remove the bleed bolt from the brake pump and connect the syringe.
    Warning: Never remove the reservoir cap.



d. Hold the syringe with the syringe end pointing upwards so that escaping air bubbles can be trapped in the syringe and are not forced back into the system.

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e. Pull and push the syringe 5 times to alternately build up vacuum/overpressure.
   Note: The Triple-B-Tool must remain between the caliper pistons to prevent the pistons from falling out.
f. Push the caliper pistons all the way back, starting with the small pistons/those furthest away from the caliper syringe. The pistons must not fall out of the brake caliper.
g. Pull and press the syringe again and create 5x vacuum/overpressure.
   Note: In the final step, build a little pressure in the syringe. Afterwards, do not create any more vacuum on the syringe.
h. Push the caliper pistons all the way back to prevent the brake system from overfilling.
i. Remove the syringe and the M4/M5 connection from the brake pump.

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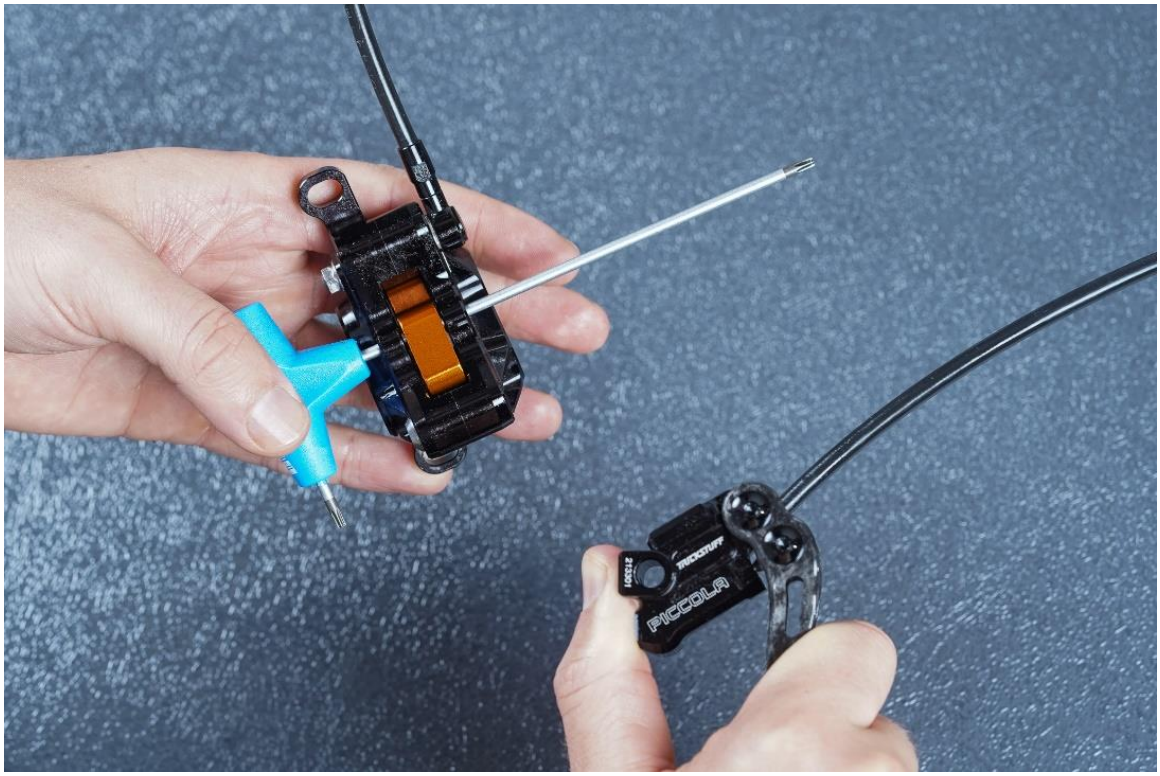
i. The bleed bore should be filled to the top with oil, rather overflowing. Never underfill the system.

ii. Screw in the bleed bolt. If damaged, replace the O-ring beforehand. No air must get under the bolt (tightening to 1,5 - 2Nm).

j. Insert the bleed block into the brake caliper and check the pressure point.



k. Clean the brake system with warm water and plenty of washing-up liquid.

l. Install the pump housing in its original position.

m. Check that there are no leaks from which brake oil is escaping.

Important: Also check the following under high pressure: Pull hard on the brake lever of the brake and hold the pressure for 30 seconds. If the lever force drops or oil leaks from the brake, please contact the Trickstuff-Support.

n. Remove the bleed block, put the brake pads back into the brake caliper and mount the wheel on the bike.

5. Assembly and disassembly of fittings

A: Overview Trickstuff fittings

	Kevlar hose	Goodridge Raw	Goodridge Carbon	Goodride Black
Piccola	ANGLED & M6X1 5MM	-	-	-
	BANJO & M6X1 5MM	-	-	-
Piccola HD	BANJO & BANJO 5MM	-	-	-
	ANGLED & BANJO 5MM			
Direttissima	KV M8X0.75 & BANJO 5MM	GD M8X0.75 & BANJO 5MM	GD M8X0.75 & BANJO 6MM	GD M8X0.75 & BANJO 6MM
Maxima	KV M8X0.75 & BANJO 5MM	GD M8X0.75 & BANJO 5MM	GD M8X0.75 & BANJO 6MM	GD M8X0.75 & BANJO 6MM

Note: Trickstuff fittings are screw-ins and are reusable. No spare parts such as pins or olives are required for installation.

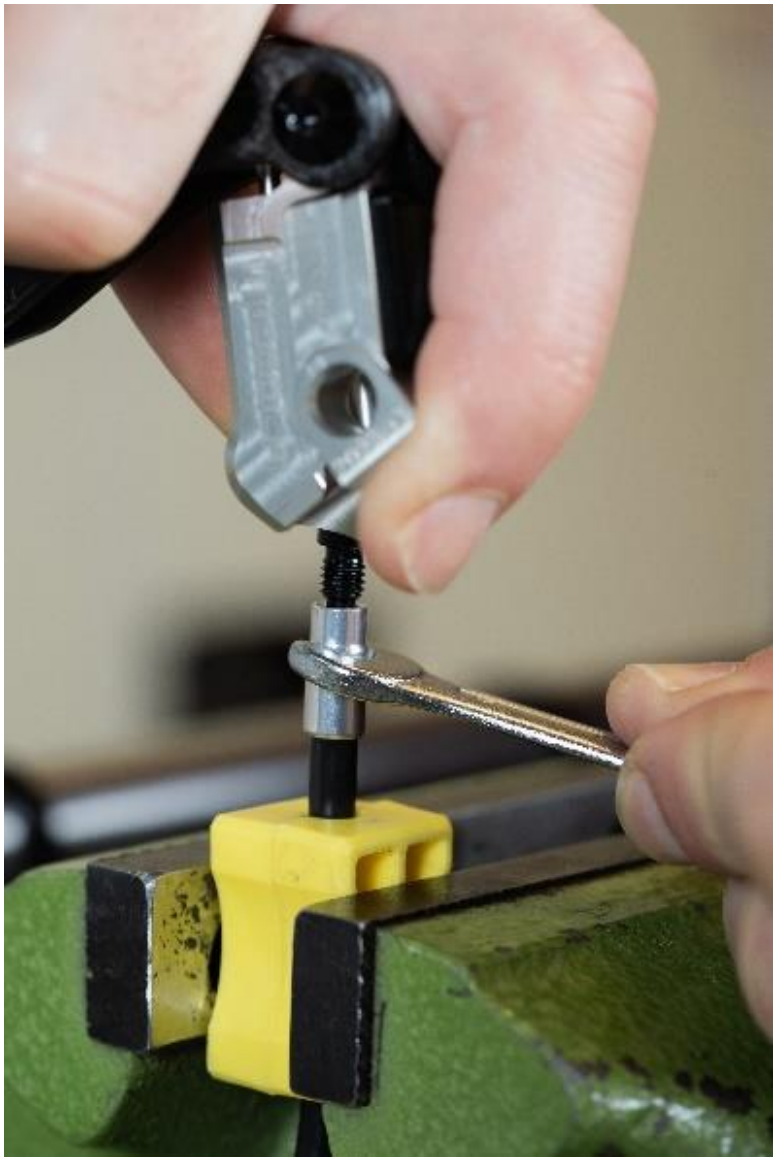
B: Disassembly of fittings

To shorten the brake hose, the brake hose must first be removed from the brake pump.

Piccola pump (Kevlar hose)

1. First remove the fitting (Banjo/Angeled) from the Piccola pump. To do this, loosen and remove the hollow screw of the hose connection with a Tx25.
2. Clamp the brake hose vertically in a vice using a mounting block.

3. Hold the fitting collar with a 6mm open-end wrench and turn the fitting counterclockwise out of the fitting collar.



Note: Make sure that the open-end wrench does not twist against the brake hose.

4. Remove the fitting collar from the brake hose by pulling it off.

Direttissima / MAXIMA pump (Kevlar hose)

1. Hold the fitting collar with a 6mm open-end wrench and turn the fitting counterclockwise out of the fitting collar. For support, you can, for example, insert a screwdriver into the ring connection to enlarge the lever.
   Note: Make sure that the open-end wrench does not twist against the brake hose. Remove the fitting collar from the brake hose by pulling it off.

Direttissima / MAXIMA pump (Goodridge hose)

1. Hold the fitting collar with a 8mm open-end wrench and turn the fitting counterclockwise out of the fitting collar. For support, you can, for example, insert a screwdriver into the ring connection to enlarge the lever.
2. Remove the fitting collar from the brake hose by pulling it off.

C: Assembly of fittings

Once the brake hose has been shortened to the desired length, the fittings must be screwed back onto the brake hose:

1. Clamp the brake hose in the correct length vertically in a vice using a two-piece mounting block. Make sure that the hose does not kink during the following steps.
2. Put the fitting collar over the brake hose and push it onto the brake hose as far as it will go. You can use a soft-face hammer for support and carefully tap the fitting collar to the stop.
3. Widen the inliner in the brake hose by using a spike (e.g. a nail or a 1.5mm and 2mm Allen key in stages). Important: Make sure that you insert the spike vertically into the inliner and do not damage the inliner under any circumstances.

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4. Apply a little bit of assembly grease to the thread of the fitting.
5. Secure the fitting collar with the open-end wrench (6mm for Kevlar hose, 8mm for Goodridge hose) to prevent it from twisting.

6. Align the fitting axially to the hose and screw it into the brake hose as far as it will go using low axial manual force.
   Note: It is essential to avoid lateral loads in order to prevent damage of the inliner of the brake hose.

   Tipp:

   → Direttissima/MAXIMA: If the fitting is already screwed to the brake pump, you can use the brake pump as a tool.

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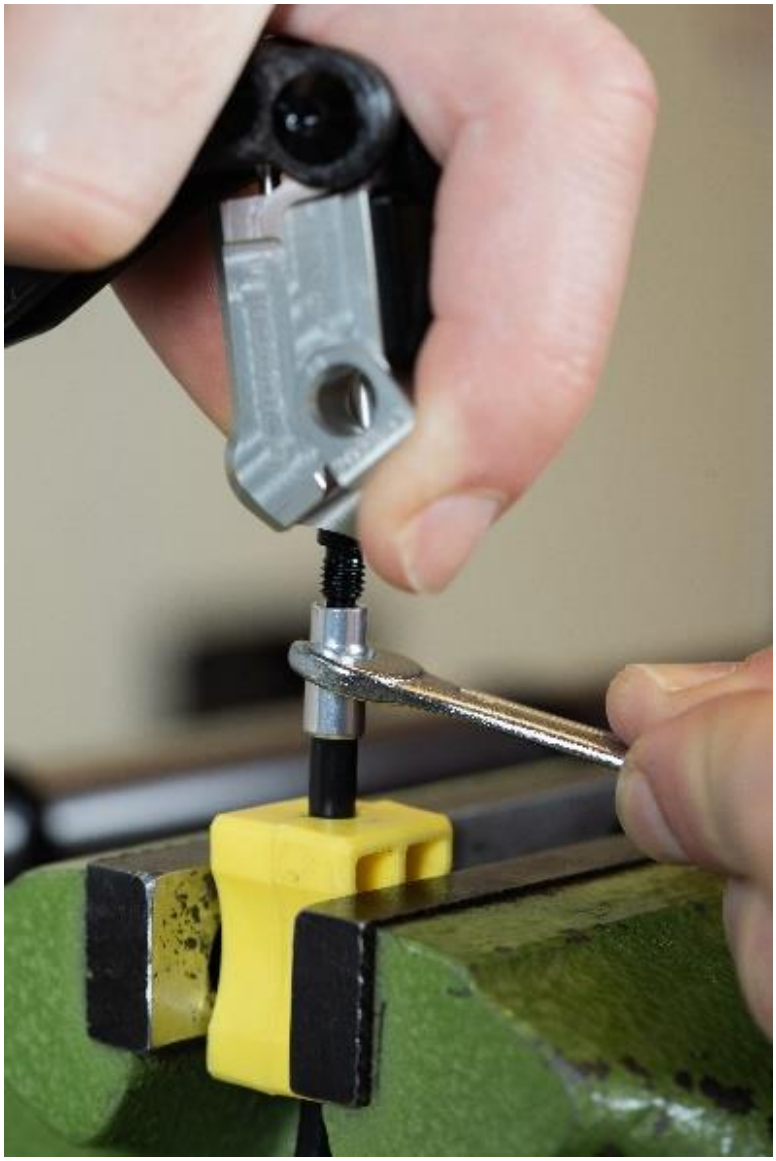
→ Piccola: You can turn the fitting as shown in the picture to use the pump as a support tool for mounting the fitting.



7. Open the vice and remove the hose.
8. Check the assembly of the fittings:

   → Ensure that there are no misalignments or axial errors
   → Make sure that there is no gap between the fitting and the fitting collar.

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9. Reinstall the brake hose on the brake pump. Make sure that you insert the appropriate O-rings:
    a. Banjo/Angled: 2x O-Ring 6x1mm
    b. M6x1: 1x O-Ring 5x1,1mm
    c. M8x0,75: No O-Ring. A small gap remains here at the transition from fitting to the pump. (Torque: 4-6Nm)

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6. Alignment of Goodridge hoses

Note: Goodridge steel braided hoses tend to twist during installation. To counteract this, we use rotating fittings.

1. If not done already, remove the brake pump from the handlebar.
2. Position the brake pump on the bike, the brake hose must already be cut to the correct length.
3. Place one open-end wrench on each fitting collar (2) and the fitting (1).
4. Open the fitting collar (1) by ¼ turn.
5. open the fitting (2) by ¼ turn.
6. Align the brake hose in such a way that it is not twisted in its final state.
7. Turn the entire pump another ¼ turn.

8. Tighten the fitting (2) with 4-6Nm
9. Close the fitting collar (1) by ¼ turn.

Technical changes, errors and misprints excepted.

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