1) Remove Rear Tire off Scooter

2) Drill & Tap 1/4-20 (2) places For Brake MTG Bracket, Use USA Allen key

3) Put New tire Assy back onto Scooter

4) Remove shorter Brake Line off Caliber & replace with Longer Brake Fluid Line & tighten Fitting & hose to Brake Caliber

5) Mount Brake Caliber to Brake MTG Bracket. Note: Caliber screws are <u>metric Allen key</u>

6) Run Longer Brake tubing up thru the Bike. Follow old path of the Drum brake path.

7) Attach hose & FARROW to Brake Lever handle.

8) Make sure caliber Alignment to Disk wheel & hose system sealed @ the handle Brake lever is secured and tight.

9) Take syringe and mount plastic (Clear) tube to syring & threaded Fitting From short brake hose to insert Fluid into Right side ~~hole~~ hole to Fill caliber with Brake Fluid.

10) Open top of Brake resoirvoir to Fill Brake Fluid & let Air out.

11) Fill Brake caliber @ Bottom of Caliber

12) Remove Syringe & tighten Fill cap.

13) Pump Brakes & release air @ Bottom of Fill Cap & retighten

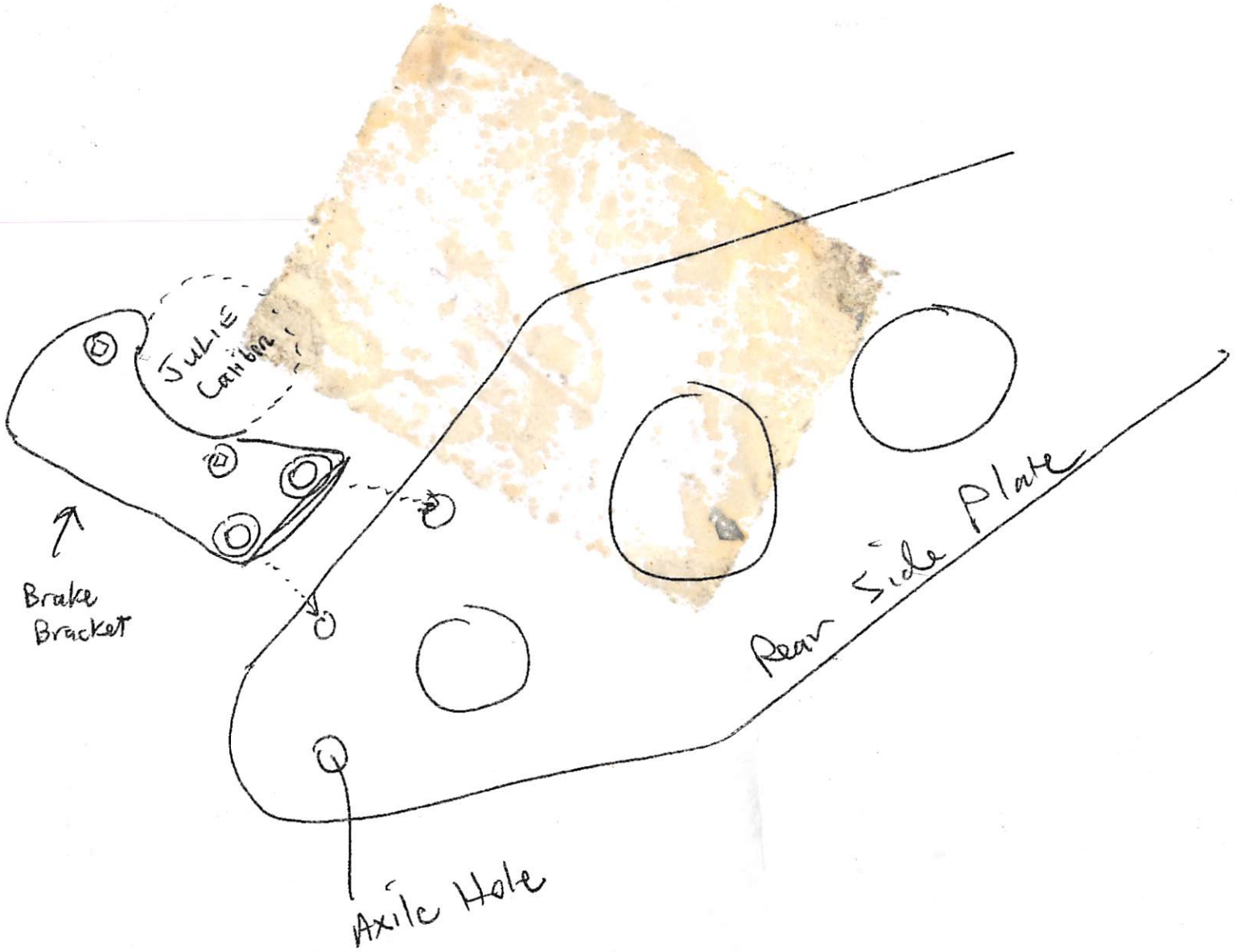
14) Do step 13 2 or 3 times

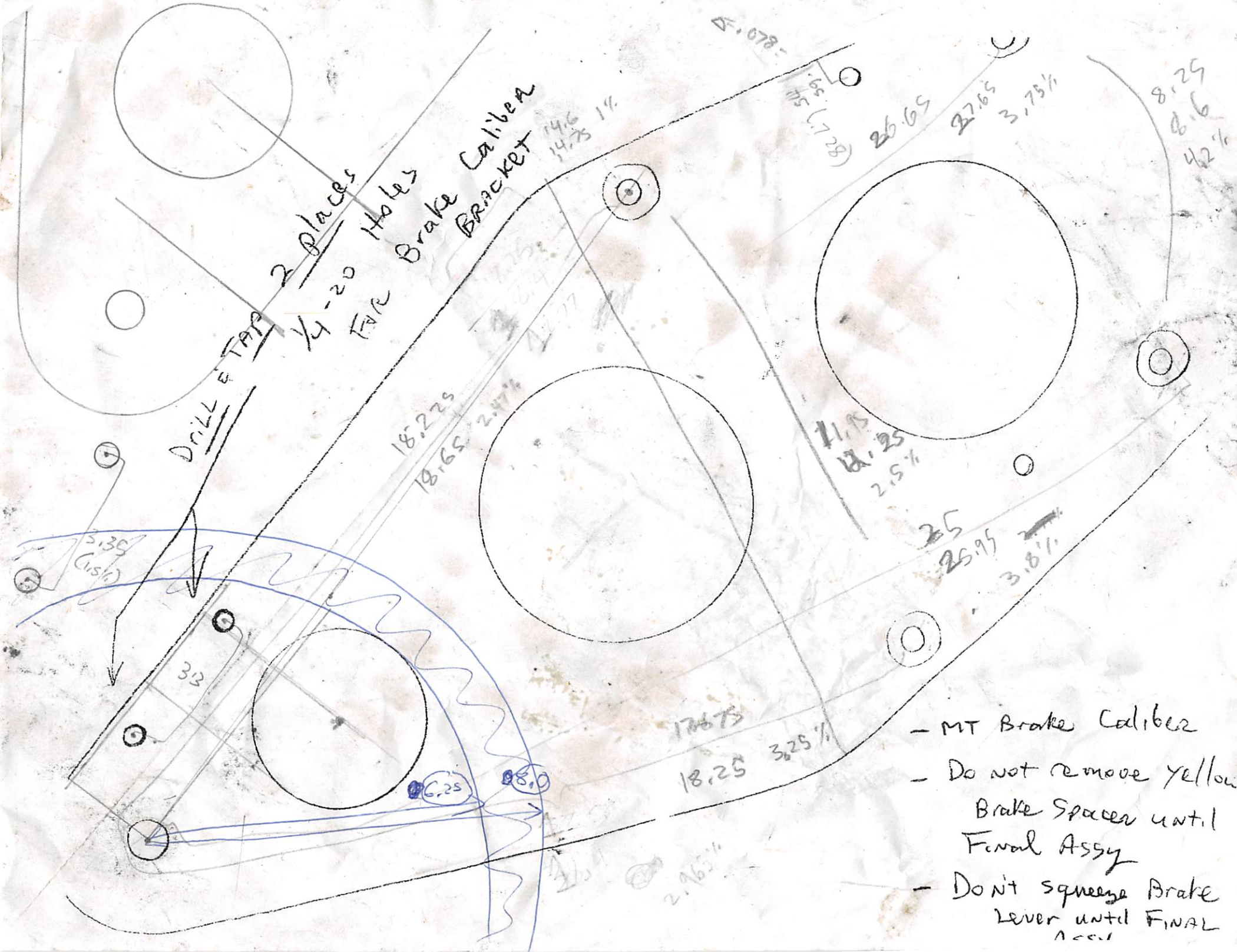
15) ReFill reservoir & close reservoir Fluid CAP with Torx Key

16)

NOTE: IF not sure, take Mounted Assy to any Bike Shop in Local Area & they CAN Bleed Brake System For you!

Good Luck!

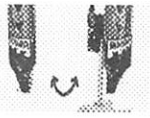

Julie
Caliber
Brake
Bracket
Rear Side Plate
Axle Hole


Drill & Tap 2 places
1/4-20 Holes
For Brake Caliber
Bracket
- MT Brake Caliber
- Do not remove Yellow Brake Spacer until Final Assy
- Do Not squeeze Brake Lever until FINAL

6. Shorten the hose

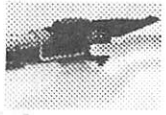
The Julie is a low-pressure system and comes with the same nylon hose that is used on MAGURA rim brakes. Do NOT use the reinforced hose of the other disc brakes with "Disc Tube" imprint and do NOT mix and match items of different MAGURA disc brakes!" Any misuse might cause serious accidents!

Never touch either the rotor or the brake caliper after long braking as this may cause serious burns.

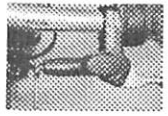


1. Remove the wheel so that you have free access to the brake caliper. Push both brake pads back by putting the transport device or a flat blade screwdriver into the gap. Move the screwdriver **slowly** back and forth until both caliper pistons are fully retracted and flush with caliper body.

Never push back the pistons without the brake pads mounted! Open the brake system only after having pushed back fully the brake pads.



2. Loosen the brake lever clamping screw with a 5mm allen key. Turn the brake lever and ensure that the reservoir is horizontal. Squeeze slightly the lever blade and slide the 2mm allen key between brake lever and lever blade.

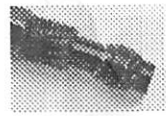


3. Slide the hose protection. Unscrew the sleeve nut on the brake lever with an 8mm open-end wrench and pull the hose out **carefully. Hold the hose carefully to avoid any loss of oil! Do not squeeze the lever blade with the system open!**

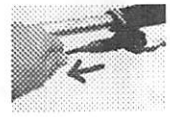
4. Put the hose on a workbench and shorten it with a sharp knife. The best tool is the MAGURA cutter (code 0321 233). **Do not use saws or pliers!**

If your frame is not equipped for routing hydraulic lines you should now mount the hose fitting kit for your rear brake according to the instructions that are included in the kit.

Hold the hose carefully so that it cannot snap away! Cut the hose squarely! The sleeve nut can be re-used. The olive cannot be re-used and must be replaced!



5. Slide on the sleeve nut and a **new** olive onto the hose. Push the hose with the sleeve nut and the new olive **fully** into the brake lever and tighten the sleeve nut with an 8mm open-end wrench. **Tightening torque: 4Nm/34 in.lbs.**



6. Always check for correct installation by pulling on the hose. Make sure that the system has no leaks. Squeeze the lever blade, hold pressure and check hose connections and the reservoir cover for eventual leaks.

Squeeze the lever blade several times (pump) to push the pads to their proper position until the lever feel becomes very firm. If you cannot realize this, bleed the brake (see page 15 onwards).

8. Repairs

disc brake service kit (code: 0721 294)
Don't panic if the hose snaps! With the disc brake service kit and a separately available spare hose (see spare parts pages 21/22), this can be repaired easily.

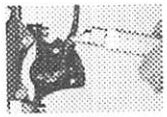
The Julie is a low-pressure system and comes with the same nylon hose that is used on MAGURA rim brakes. Do NOT use the reinforced hose of the other disc brakes with "Disc Tube" imprint and do NOT mix and match items of different MAGURA disc brakes! Any misuse might cause serious accidents!

1. Remove the damaged hose from both the brake lever and the caliper. Cut off the barbed adapter (caliper connection) with a sharp knife. Slide both the sleeve nut and hose protector on the other side. All mentioned parts can be re-used. Throw away the damaged hose.

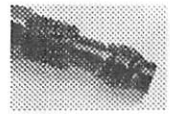
2. Prepare a new hose: the nylon hose of the **Julie** disc brake is identical with the one of the MAGURA rim brakes. Clamp the hose as shown with the help of the two clamping jaws (code: 0321 239) into a vice. Hose has to stick out 1,5cm as shown. Use a nylon mallet to tap the barbed adapter **carefully** into the hose.

The barbed adapter must be installed as shown. Never heat up the hose to install the barbed adapter. This might cause the hose to burst with total failure of the complete brake system.

3. Correctly installed barbed adapter.



4. Tighten the prepared end of the new hose onto the caliper.
Tightening torque: 4Nm/34 in.lbs.

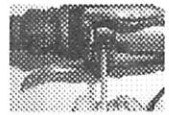


5. Measure the requested length of the hose you need and shorten the hose accordingly with a sharp knife. Slide on the hose protector, sleeve nut and a new olive onto the hose. Push the hose with the new olive **fully** into the brake lever and tighten the sleeve nut with an 8mm open-end wrench.
Tightening torque: 4Nm/34 in.lbs.

After the installation of a new hose you will always have to refill the brake. The following chapter 9 describes who the filling has to be done.

9. Filling and bleeding a brake

Brake Oil: MAGURA disc brakes use as transmission medium low viscosity mineral oil, the biodegradable MAGURA ROYAL BLOOD. Contrary to DOT brake liquid the MAGURA ROYAL BLOOD does not irritate human skin or strip the paint of your frame. Moreover it does not absorb water like DOT and does not have to be changed regularly. What sounds unbelievable is a fact: you can use your brakes over years without having to touch them (except brake pad change!)



1. Loosen slightly the clamping screw of the brake lever with a 5mm allen key and turn the brake lever so that the reservoir is positioned horizontal. Slightly tighten the **clamp** screw in that position.

2. For filling and bleeding a MAGURA disc brake you will need the disc brake service kit
(Code: 0721 294) including all necessary tools.

3. Prepare the transparent filler tube by pushing in by hand the M6 barbed fitting. Put the other end of the filler tube on the syringe and fill the syringe **completely** with MAGURA ROYAL BLOOD mineral oil. Fill the syringe completely and make sure that **there are no air bubbles inside.** Turn the syringe eventually to push out air bubbles.

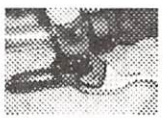
4. Remove the brake pads as described on page 12 and slide the YELLOW transport device as shown **with its THICK END** between the caliper pistons. Squeeze slightly the lever blade (pump) to tighten the transport device. **Only use the YELLOW transport device for this procedure, the formerly used black one is not suitable for this work!**

5. Fix the caliper so that the connecting bolts of the caliper (arrow) are positioned horizontally. **If you do not follow meticulously this advice, a proper bleeding of the brake will fail!** It might be necessary that you have to unscrew the caliper for that or to turn the fork/bike as shown. Unscrew bleeding screw with a 3mm Allen key. Screw in the prepared syringe and tighten it by hand.

Place now a rag, which has to be free of oil or lubricants around the reservoir and, more important, around the brake caliper. Care for a clean working environment. No dirt or particles may come into the brake system!

6. Unscrew the Torx T7 reservoir cover screw and remove the cover with the membrane sitting below. Begin to **slowly** press the oil contents of the filling syringe through the system until no further air bubbles can be seen

7. Press the MAGURA ROYAL BLOOD oil through the system. Use a second syringe to suck any overflowing oil. at the reservoir. Then pull the filler syringe to suck oil back. Repeat procedure 3-4 times and actuate CAREFULLY the lever blade simultaneously. **Make sure that there is always enough oil in the reservoir when you suck the oil with the filling syringe.**



8. Use the second syringe to suck any overflowing oil. The rag around the brake lever and the caliper prevents overflowing oil from dropping down and contaminating and killing the brake pads. Push **the complete contents** of the filling syringe through the system.

9. The reservoir has to be full to the top before replacing the membrane and the cover.

10. Replace the cover with the membrane onto the reservoir. Oil will spill during this procedure therefore do not forget to place a rag around the brake lever. Tighten the cover screw until the cover is flush with the reservoir. **Use only the original Torx T7 bolt. Any other screw will lead to leaks, damages and failure of the whole system! Tightening torque 0,6Nm/5 in.lbs**

11. Remove the syringe and screw in the 3mm allen bleeding screw. **Tightening torque: 2,5Nm/22 in.lbs.** Re-position the brake caliper **(tightening torque 6Nm/51 in. lbs.).** Re-install the brake pads and the wheel.

Always pull the lever blade several times (pump) until the brake pads touch the rotor.

Always check for correct installation by activating the lever blade and checking for eventual leaks.

Never contaminate brake pads with oil or grease this causing permanent loss of brake power! Contaminated pads are definitely dead and must be replaced! A contaminated rotor can be cleaned with warm dishwater or alcohol.

10. The disc brake wheel

The XC disc brake wheel
There already exists enough literature concerning wheels, so just a few tips how a well-built X-country disc brake wheel has to be.

Use spokes with a diameter of 2mm (arc)/1,8mm which you cross three times. **No radial lacing with disc brake wheels!**
Head-inside-spokes (=arc-outside-spokes have to be pulled, i.e. these spokes point forward on the front wheel; on the back wheel these spokes point forward on the rotor side and backwards on the drive side. All spokes have to be stressed equally and high.

Never use ultra lightweight quick releases with titanium or aluminum axles for your wheel sets in combination with a disc brake. You will not be in a position to realize the necessary tightening torque!