

WORKSHOP 2011 DISC BRAKES

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9. Filling and bleeding a brake



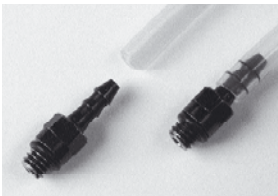
Brake oil: MAGURA disc brakes use as transmission medium low viscosity mineral oil, the biodegradable MAGURA ROYAL BLOOD. Contrary to DOT brake liquid the MAGURA ROYAL BLOOD does not irritate human skin or strip the paint of your frame. Moreover it does not absorb water like DOT and does not have to 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 5 mm allen key and turn the brake lever **so that the reservoir is approximately 15° upwards from the horizontal position**. 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 including all necessary tools.



3. Prepare the transparent filler tube by pushing in by hand the M6 barbed fitting on which you have mounted an O-ring before. 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.



5. Fix the caliper so that the hose connection is at the highest point of the caliper (hose has to be positioned vertically!). It might be necessary that you have to unscrew the lower caliper fitting bolt and to fix the caliper to realize this properly (e.g. on rearbrakes!) 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. Remove **ONLY** the bleed screw of the reservoir with a 2,5mm Allen key. The reservoir cover and the membrane underneath remain on the brake lever!



7. Put the second syringe of the service kit **WITHOUT PLUNGER** into the opened drill of the reservoir cover. Push oil from the brake caliper upwards until the oil column arrives in the syringe on the reservoir. You will see air bubbles now.



8. Now suck the oil carefully back with the filling syringe on the brake caliper. Make sure that there is always enough oil in the reservoir syringe when you suck back the oil with the filling syringe! You will see air bubbles again.



9. Actuate in addition **CAREFULLY** the lever blade to chase tiny air bubbles that might hide within the system. The job is done when no air bubbles can be seen after having followed the steps above several times.



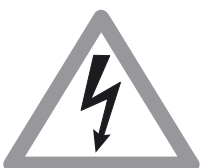
10. **Before you remove the syringe on the reservoir make sure that there is only a small quantity of oil inside.** Place a rag around the brake lever and the caliper thus preventing overflowing oil from dropping down and contaminating and killing the brake pads. Remove the syringe and close the end that was inserted into the reservoir quickly with your finger. Empty the remaining content of the syringe into a container.



11. Close the drill with the bleedscrew. **Tightening torque: 1 Nm/ 9 in.lbs.**
That's it!



12. Remove the filling syringe and screw in the 5mm allen bleed screw. **Tightening torque: 2,5 Nm/ 22 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 killed and MUST be replaced! A contaminated rotor can be cleaned with MAGURA brake cleaner, warm dishwater or alcohol.

11. Trouble Shooting

problem	reason	solution
not enough brake power no pressure point	brake was not run it	
	oil/ lubricants on rotor and/ or pads	break in the brake (page 4)
	air in the system leaking systems	clean the rotor with warm dishwater or alcohol replace contaminated brake pads bleeding the brake (page15) correct transport (page 5)
Squealing brake	badly aligned frame	Check hose connections and hose for leaks; replace hose if necessary (pages 14/15)
	Paint/ powder coating on fitting eyelets	align brake caliper with 0,2 mm spacers (page9) remove any paint or powder coating and care for an even contact surface without burrs. (page7)
	Wheel q/r skewer insuffici- ently tightened Insufficiently tightened wheel spokes	Increase tightening of q/r skewer and mount it on opposite side of caliper.
contaminated brake pads	carelessness	check for an evenly spoked wheel with high spoke tension
contaminated rotor	carelessness	brake pads must be changed
wheel cannot be mounted	Lever blade was pulled with removed wheel	clean rotor with MAGURA Brake Cleaner, dish water or alcohol Push back the brake pads with transport device or a flat blade screwdriver. (page12)
rattling noise and rough dece- leration	brake pads worn, holder of pads is wearing the rotor	
leaking hose or brake	accident, incorrect installation	brake pad change (page 12)
		change hose or defective brake lever or caliper (page 14)



You will find further tips on our website www.magura.com in the FAQ section!! Stay tuned.

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