BERINGER AERO, Aéropôle, F-05130 Tallard
Tel : +33 (0) 4 92 20 16 19
contact@beringer-aero.com

BRAKE SYSTEM BLEEDING PROCEDURE

Date de révision
26 fév. 2014

A. Bleeding of the braking system

1 Tools

USE ONLY the brake fluid indicated on BERINGER parts

Tools:

- Pressure bleeder kit
- lots of rags

DURING THE BLEEDING PROCEDURE, Master cylinders and regulators MUST be positioned horizontally with the screws up.

2 Method

To bleed the brake system consists in removing all air bubbles.
If bleeding is not done properly, bubbles can stay in the brake system. It will result in poor brake performances, or no brake torque at all.

Next are some recommendations:

- open the reservoir of the master cylinder : remove the reservoir cap and replace it with the proper cap delivered in the bleeding kit. Then connect the small bottle to the cap as shown on the photo.

- Open the bleeding screw of the caliper
- Connect the pressure tank to the bleeding screw of the caliper as shown on the photo

- **<u>protect CAREFULLY the brake disc and the brake pads from the brake fluid.</u>**
- Fill in the pressure tank with brake fluid
- Pump the handle of the pressure tank to reach a 15psi pressure
- The fluid goes fom the caliper up to the master cylinder reservoir

- When the reservoir is full, the extra fluid goes away to the small bleeding bottle through the transparent hose. You can see the air bubbles leaving the circuit through this hose.
- The bleeding operation is completed when no bubble can be seen any more in the hose

At this step, you should have some brake pressure when pulling master cylinder lever.
If you feel no effort at all on the master cylinder lever, that means too much air bubbles are still in the brake system. Repeat the operation taking care that you still have fluid in the tank under pressure.

- to help the bleeding process, release and pull lever 5-6 times and check if lever is harder to pull (or push) than before.

When the bleeding is completed on the first wheel:
- Close the bleeder screw of the caliper
- Disconnect the hose of the caliper
- Repeat the same operation on the other wheel.

When the bleeding is completed **on both wheels.**
- Disconnect the hose of the bleeding bottle
- Remove carefully the bleeding cap of the reservoir
- Replace it with the normal reservoir cap

Air bubbles stay always at upper points

Check your brake lines

Bleeders should be at each upper point of brake system

Do not use thinner or equivalent, it will damage seals

Clean only with dry rags or with soaper water

B. Security check before flying

it is necessary to check next points before the first flight

- **All bolts and nuts must be torqued to appropriate value and locked with wire.**
- **Distance between controls and new parts must be checked.**
- **Wheels must turn freely on the axle (2 revolutions min. when turning with hand).**
- **Safety wire around the disc must be in place.**

- **Level of brake fluid adjusted to maximum (indicated on reservoir).**
- **Clean brake fluid with dry rags.**
- **Place lever in parking position during 15min and check eventual leakage of fluid around parts and fittings. Torque again if necessary.**
- **Place lever in parking position and check that plane cannot be moved by 2-3 persons.**

On the ground:
- **Check brake efficiency: performs 2-3 stops at low speed on taxiway (do not perform more than 2-3 consecutive brakings, system can overheat).**
- **place lever in parking position and apply engine power: the plane should not move at all, even at full power.**
- **After theese tests, check again that wheel are turning freely when brakes are released (2 revolution min. when turning by hand).**

ATTENTION: Brake efficeincy can be surprising. Make sure than you can control the new brake system before flying.

For any question, please contact directly BERINGER AERO