

Master Cylinder Specific Bleeding Procedure

Your master cylinder must be bled before actuation or final installation. It's perfectly fine to mock up the install and test fit your master cylinder but it <u>absolutely must be properly bench bled</u> prior to final install and use. To operate properly, hydraulic brake systems must be absolutely free of air. That starts with the master cylinder, especially when new.

Bench bleed your master cylinder by:

- Securing it in a vice, or clamping it upright to a sturdy surface.
- Hook up fittings and clear hoses such as from a bench bleed kit.
- Confirm seated hoses to fittings, then loop hoses to dump fluid back into master cylinder reservoirs. You should submerge the hose ends into fluid.
- Actuate the master cylinder slowly and to the full depth with a tool such as a large ph.3 screwdriver. Too fast may shoot fluid up out of the compensating ports and care should be taken. Repeat until no more air is seen in the lines. It may be left to sit for bubbles to settle before slowly repeating.
- Access master cylinder function. If a master cylinder is defective it will have no fluid flowing into the lines at all. Take note that smaller reservoirs such as for rear disc or drum may have visually lower volumes of fluid passing through the lines.
- Take the master cylinder to the vehicle when ready to install. Keep it upright, and do not remove the fittings or hoses from their position in the master cylinder until you're ready to directly install the main brake lines.

After installing the properly bench bled master cylinder, you're ready to bleed the system. Manual bleeding works wonderfully when following proper procedure. Bleed closest to farthest cylinder/caliper while keeping an eye on brake fluid and never allowing the pedal to release while bleeder screws are open.

If air is still suspected to be in the system or master cylinder still, proceed with additional bleeding. Start by making sure the reservoirs are topped off. Then disconnect the first brake line <u>from the master cylinder</u> and wait until fluid drips. Next reconnect the brake line then have your assistant depress the brake pedal slowly, then while pressure is still applied to the pedal crack the brake line loose again and allow any trapped air to escape very briefly before retightening the brake line to the master cylinder, then releasing the pedal. Repeat as needed.