

WABCO

Technical Bulletin

Filling the Hydraulic Power Brake (HPB) Master Cylinder Reservoir

Hazard Alert Messages

Read and observe all Warning and Caution hazard alert messages in this publication. They provide information that can help prevent serious personal injury, damage to components, or both.

How to Obtain Additional Maintenance, Service and Product Information

If you have any questions regarding the material covered in this bulletin, or for more information about the WABCO product line, please contact the WABCO Customer Care Center at 855-228-3203, by email at wnacustomercare@wabco-na.com, or visit our website: wabco-na.com.

Filling Procedure

Before you service the Hydraulic Power Brake (HPB) system, you must perform the depressurization procedures exactly as presented. The HPB system is a pressurized system that reaches levels of up to 2,320 psi (160 bar). This pressure is not reduced by switching the ignition off or removing battery power. If you do not depressurize the system, serious personal injury or death can result.

Never add fluid above the MAX mark regardless of the charging state of the accumulators. When the system is totally or partially depressurized during service or overnight parking, fluid stored in the accumulators is returned to the master cylinder reservoir. If the reservoir was previously filled above the MAX mark, a fluid spill could occur when these conditions exist. Overfilling the master cylinder reservoir may cause damage to the cap and other components, resulting in poor braking performance and serious personal injury.

WARNING

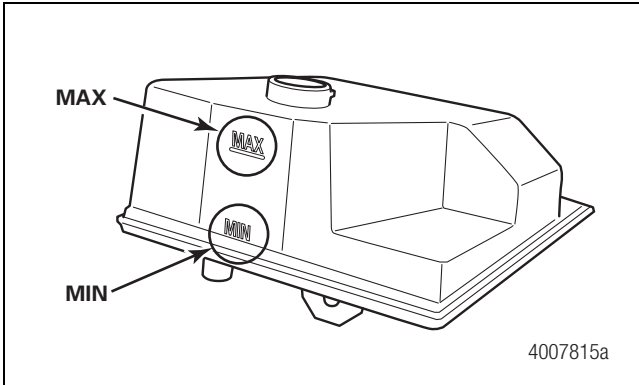
To prevent serious eye injury, always wear safe eye protection when you perform vehicle maintenance or service.

Park the vehicle on a level surface. Block the wheels to prevent the vehicle from moving. Support the vehicle with safety stands. Do not work under a vehicle supported only by jacks. Jacks can slip and fall over. Serious personal injury and damage to components can result.

1. Ensure vehicle is on a level surface and apply the parking brake.
2. Block the wheels to prevent the vehicle from moving.
3. Set the ignition key to OFF and remove the two 30-amp fuses that provide power to the brake system motors. The fuses are in the fuse panel located on the engine side of the cowl.
4. Remove master cylinder cap.
5. Connect a laptop computer containing TOOLBOX™ Software to the diagnostic connector.
6. Turn the ignition key to ON and start the TOOLBOX™ Software.
7. Depressurize the system as follows:
 - A. Depress the brake pedal a minimum of 30 times or using the latest version of TOOLBOX™ Software, click on **EOL** and select **Deplete Accumulators** from the drop-down menu.
 - B. Use the TOOLBOX™ Software to verify that pressure at both accumulators is at 0 psi.

During this process, brake fluid will return to the master cylinder reservoir from the accumulators. Monitor the reservoir fluid level to ensure it does not overflow.
8. Turn the ignition key to OFF.
9. With the accumulator pressure decreased, verify that the brake fluid level is at the MAX mark on the master cylinder reservoir. If brake fluid in the reservoir is above or below the MAX mark, remove or add brake fluid as necessary until the MAX mark level is achieved. If brake fluid needs to be added, ensure that it is from a clean, sealed container. Never add fluid above the MAX mark.
10. Reinstall the 30-amp motor fuses and turn the ignition ON. Both motors will start running until both circuits reach the cut-off pressure at approximately 2000 psi (138 bar).
11. Monitor the pressure in each circuit using the TOOLBOX™ Software.
12. When both motors stop, ensure that the pressure level in each circuit reached the cut-off level. This will decrease the brake fluid level in the master cylinder reservoir.

13. With the system completely charged, the brake fluid level will be approximately 0.98-inch (25 mm) below the MAX line.



WABCO

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