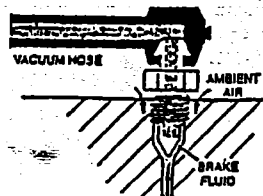


TROUBLE SHOOTING

AIR BUBBLES OR FOAM IN VACUUM HOSE

This is completely normal (see diagram below), since ambient air can often be drawn into the bleed hose along with fluid from the circuit unless the threads are airtight. If desired, threads can be sealed with silicone lubricant or Teflon tape, but this is not necessary for proper bleeding function.

(See operating instructions.)



Typical Bleeder Screw

NO FLUID DRAWN INTO CANISTER

Is bleed screw blocked? Replace or clean as needed. In badly contaminated circuits, where debris and rust particles may clog the small bleeder hole repeatedly, it is possible to remove the screw and apply the fitting directly to the port until clean fluid is flowing. Replace the bleed screw and bleed normally.

Is there fluid in the system? Check reservoir level.

NO VACUUM

Check air supply. Look for partially blocked fittings or filters, incorrectly adjusted regulators or kinked hoses. Check that silencer isn't blocked causing back pressure. Clean or replace silencer element.

Check that the overflow valve is free. If it is jammed in the top position, hold your hand over the exhaust and turn on air to push the valve slide or replace if necessary.

WARNING!

NEVER RE-USE ANY OLD BRAKE FLUID. ANY FLUID COLLECTED IN THE CANISTER SHOULD BE DISPOSED OF SAFELY.

CAUTION!

IF REPEATED VACUUM BLEEDING FAILS TO OVERCOME SPONGINESS, THIS CAN BE AN INDICATION OF A DEFECTIVE CUP OR MINOR PITTING OR DAMAGE TO A CYLINDER IN THE CIRCUIT. VACUUM BLEEDING WILL SHOW UP MINOR LEAKAGE THAT MIGHT NOT BE NOTICED WHEN BLEEDING MANUALLY OR WITH PRESSURE. CHECK ANY SUSPECT BRAKE COMPONENTS CAREFULLY. EVEN NEW PARTS CAN BE DEFECTIVE. BY MANUALLY BLEEDING, MASTER CYLINDER CUPS COULD HAVE BEEN DAMAGED BY TRAVELING OVER PORTS OR FROM CONTACT WITH RUST DEPOSITS.

BRAKE FLUID BLEEDER

OPERATING INSTRUCTIONS

Read completely before using!

1. Connect the bleeder to a compressed air source (80-120 P.S.I.). As long as the top lever is depressed, a powerful vacuum is created in the canister.
2. Remove master cylinder reservoir cap and vacuum out the old fluid with the rubber fitting. Top off the level with new brake fluid. If using the Mark III Refiller System, fasten it to the top of the master cylinder reservoir. Then, while bleeding, fresh fluid will automatically be drawn into the reservoir and the level will be maintained.
3. Make sure that wheel cylinder bleed screws are clean and if the vehicle has a load sensing/proportioning valve, make sure that it is open. Connect the rubber fitting over the nipple of the bleed screw. (Note: On some late 1980 model GM cars with recessed bleed screws, place the appropriate adapter socket (optional) over the screw and connect the rubber fitting to the nipple on the adapter socket.)
4. Depress the lever on the top of the bleeder, open the bleed screw slightly until brake fluid is visible in the hose and keep it open for 20 to 30 seconds, close the bleed screw and release the lever. Repeat on all remaining bleed screws. When using the vacuum method, a small amount of air will be drawn around the threads of the bleed screw, some small air bubbles or foam will always be visible in the vacuum hose. This is **NORMAL**. If desired, a small amount of silicone grease or Teflon tape on the bleed screw threads can seal air out and will help prevent seizing of the screw due to corrosion in the future.
5. Unless using the Mark III Refiller System, top off the master cylinder reservoir occasionally to avoid drawing additional air into the system. After bleeding, check brake pedal action for firmness to verify that air has been completely removed.

Special Notes: Under no circumstances should the old contaminated fluid collected in the canister be reused.

Dispose of it safely.

Car manufacturers recommend that brake fluid be changed annually or whenever the brakes are serviced.

Refer to vehicle manufacturer manual for proper bleeding procedures.