

Wheels: An e-mail from Dave writes, “I own a 1992 Oldsmobile, Eighty-Eight Royale, which currently has a right front caliper which does not release properly. Initially I thought the caliper piston was mechanically seized. Unfortunately after replacing it, I discovered the problem persisted. I have reflashed the brake line via bleeding and performed the following tests: after cracking open the bleeder valve, the caliper releases. I then suspected the proportioning valve, however, when I disconnected the brake line from the master cylinder (the top rear fitting), the hydraulic pressure remained high enough, and the caliper does not quickly release the rotor. I did not disconnect the brake hose at the piping fitting to test (due to fear of rounding the nut on the brake line). At this point, I am unsure of what is a normal residual brake line pressure to confirm whether I have a restricted brake line/hose versus another caliper with a piston problem. Any suggestions would be greatly appreciated.”

Halderman: The problem is most likely due to a restricted brake hose. There should not be any residual pressure at the caliper. Residual check valves were once used on drum brakes, but even this valve is not used by most vehicle manufacturers. I recommend that both front rubber brake lines be replaced because both have been operating under the same operating conditions for the same amount of time. The proportioning valve (if equipped) controls the rear brakes and the metering valve (if equipped) controls the front brakes and neither of these could cause your brake problem. I assume you discovered the caliper was sticking because the pads were worn on the right front only. You may also want to check for proper operation and adjustment of the rear brakes to be sure they are doing their job so the front ones do not have to do all the work.

Wheels: What other tests or procedures should Dave consider when trying to restore the brakes?

Halderman: Check that the rubber brake hose has been installed correctly by observing the ribs on the outside of the hose. These ribs are manufactured into the hose to help service technicians notice if the hose has been twisted during service. It is not unusual for a service technician to twist a brake hose when the caliper assembly is reattached to the caliper mounting. All caliper slides and guide pins should be thoroughly cleaned and lightly lubricated with silicone brake grease. Do not use chassis or wheel-bearing grease because this can cause rubber brake seals and O-rings to swell causing the brakes to stick and not move freely as designed.

CAUTION: Never allow a caliper to hang from the rubber brake hose. The weight of the caliper can damage the inside of the rubber hose and could be the root cause of Dave’s problem.

