

# BRAKE BLEEDER

There was an almost irresistible urge to call the home-made gadget below THE LITTLE AUSSIE BLEEDER or THE LITTLE AUSSIE (BRAKE) BLEEDER. After all, I did become a somewhat belated fan of that outrageous, bumbling and conspicuously haemophilic Norman Gunston, the TV creation of Australian actor Garry McDonald. Long-suffering readers will note with relief that I did not succumb - firstly, I am aware of the sensitivities of fellow Citroën-istes; secondly, I think the idea is not originally Australian ("Practical Motorist - UK"?); and thirdly, the name was a bit long for the top of the page.

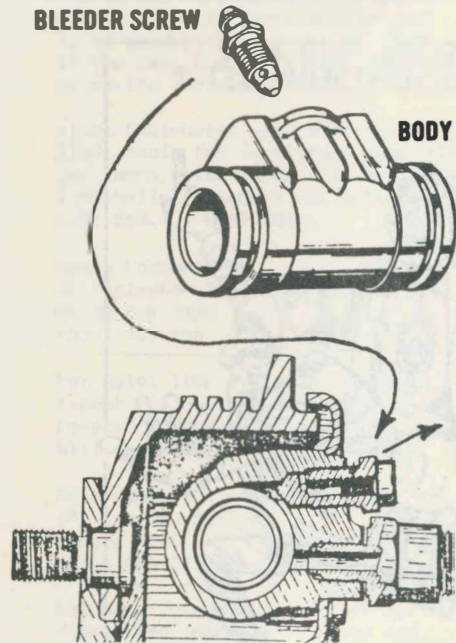
The technique should apply to most Australian, American, British, Continental and Japanese cars and to "conventional" Citroëns such as the Traction. I'm not sure about the high-pressure brake systems of the hydro-pneumatic Citroëns.

It is essentially an adaption of the old plastic-tube-over-the-bleeder-nipple-and-the-glass-jar trick. You know how it goes - your bored assistant (Madame Citroëniste?) "upstairs" in the cockpit, foot on the brake pedal; you on your back "downstairs" on the garage floor, the "dust of ages" falling in your eyes, one hand holding the glass jar, the other operating a spanner on the wheel cylinder bleed-nipple, and calling out: "Push, hold, release, push ... etc.", sounding for all the world like an instructor in a grotesque pre-natal exercise clinic.

Now try this instead. Send Madame Citroëniste off to organize a nice hot cup of tea, while you pick up two or three discarded tubeless-tyre valves (ideally with the heavy rubber base still intact) from the nearby tyre installer, and about one-third to half

a metre of clear plastic tube of 6 mm (quarter-inch) internal diameter and a scrap of the next size down which is a jam-fit into the 6 mm stuff. Make sure you have the right-sized small ring spanner(s) to hand to fit the size(s) of nipples on your car. The appropriate spanners seem to be variously 7 mm, 10 mm, ¼ AF or 7/16 AF. Open-enders are not nearly so good - they slip and round-off the shoulders of the screw. Put the ring spanner over the nipple to be bled and force one end of the plastic tube onto the nipple - sleeve down with the smaller tube to get a firm fit on smaller nipples. Take one of the tyre-valves (with its internals intact) and screw its brass end into the other end of

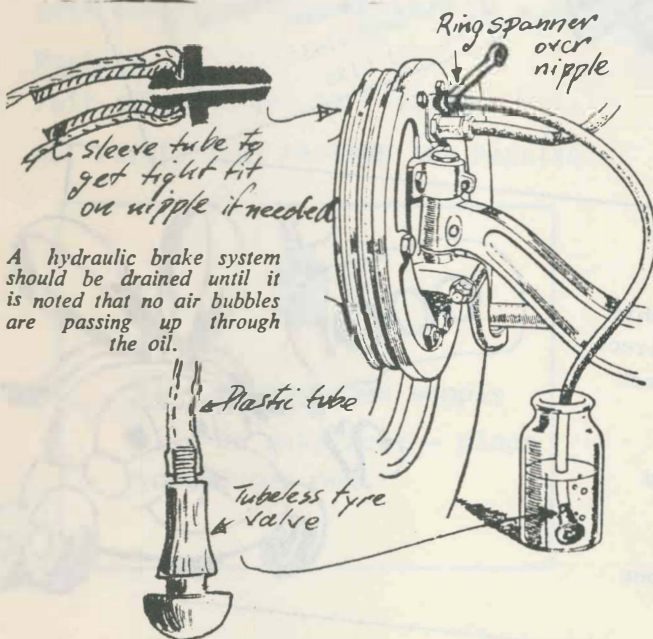
BLEEDER SCREW



the plastic tube, and drop the valve into the glass jar beside the wheel and slacken the nipple about half a turn. Now back "upstairs".

Top up the master cylinder with fresh hydraulic fluid and keep it topped-up during the operation. Now you can sit at the wheel in comfort, pumping away. The tyre valve will pass air and old fluid, and won't let any return into the system. After 3- or-4 pumps, check the master cylinder reservoir and check downstairs. Repeat as necessary. When you find the emerging fluid in the plastic tube is clear and free of air bubbles, close off the nipple and move on and repeat at the next wheel. The trapped air emerges with a distinctive and rather vulgar sound, so you can hear when a line is air-free.

Since normal glycol-based brake fluid absorbs moisture and becomes discoloured and less effective, it is advisable to bleed the brake system yearly, using new or at least well sealed fresh unused fluid. It is not expensive, and should reduce troublesome brake system re-builds. The



discolouration is probably due to a combination of atmospheric dust (though this should be stopped by the flexible seal to the master cylinder), wear particles, and rust from moisture acting on connecting lines etc. Overseas there are anti-corrosion brake fluids available. The answer here may be to use silicone brake fluid but some have reservations about it. Conventional brake fluid is murderous on paint finishes - be very careful and wipe up any spills immediately with a cloth soaked in methylated spirits and flush off with water.

Of course, you can buy commercial brake bleeders, but they cost money (perhaps \$10) and no doubt you have

other things to spend \$10 on.

Now, off you go and enjoy that cup of tea with Madame Citroëniste who will, no doubt, be more kindly disposed to you than last time you bled the brakes.

BILL GRAHAM.

The double screw arrangement on some older wheel cylinders can be replaced with the modern single bleed-screw/nipple. The appropriate one for Traction cylinders appears to be the 7/16 AF one. Incidentally, scored and pitted cylinders can be recovered by having them sleeved - don't throw them away.