

# Brakes

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The excellent article about disc brakes in the last issue of *Minor Matters* showed one way to improve *Morris Minor* braking. Members wanting to keep their car as original as possible may be interested to know that it is possible to improve the braking on many Minors without modifying the basic system, while extending the service life of many components.

In 1995, we asked Roy Halsall (remember 'Roy's Wonderful Welding'?) to prepare our 1969 Traveller for a Mediterranean trip. As



well as servicing the car Roy suggested a complete brake overhaul. Out came the old corroded steel brake pipes and all the worn brake linings. The wheel cylinders and the master

cylinder were scrapped, as well as the flexible couplings, which can degrade inside while looking OK on the outside. The brake drums were not

badly scored or worn, so these were reused. Roy then rebuilt the braking system with copper pipes and original specification master cylinder, wheel cylinders and brake linings. It didn't need an extra brake fluid reservoir. The system was then filled with Dot 5 Silicone brake fluid and bled until all air had been removed. The only way you can tell what has changed is by lifting the driver's carpet to reveal the 'Dot 5' notice on the top of the master cylinder (see photo).

The difference was little short of astonishing and we realised that, when new, the later Minors had pretty good brakes. What we tend to forget is that over the years pipes become partly blocked, wheel cylinders seize up because of corrosion caused by the water that builds up in normal brake fluid, and the system gradually becomes less efficient. While not as good as a disk brake conversion, the brakes of a Minor when properly restored provide perfectly adequate braking in normal circumstances, especially when using modern radial tyres.

The great advantage of silicone brake fluid is that it is not hygroscopic (it doesn't absorb water) like normal fluid, so doesn't cause brake cylinders to seize up or need changing every few years. Sixteen years on from Roy's brake rebuild, the only work necessary has been replacement linings and a couple of new drums at the front after a local garage unsuccessfully attempted to skim the old ones. The brakes are still working fine and we haven't needed to replace the master cylinder or any of the wheel cylinders.

One note of caution: adding silicone fluid to a system that has previously been filled with normal fluid doesn't seem to work. Several people have reported the failure of cylinder rubber seals where this has been done. But it certainly works fine on a newly rebuilt system, as our 16-year road test shows.

If you're reading this Roy, after all this time, thanks for a perfectly prepared car, it is still going strong!