

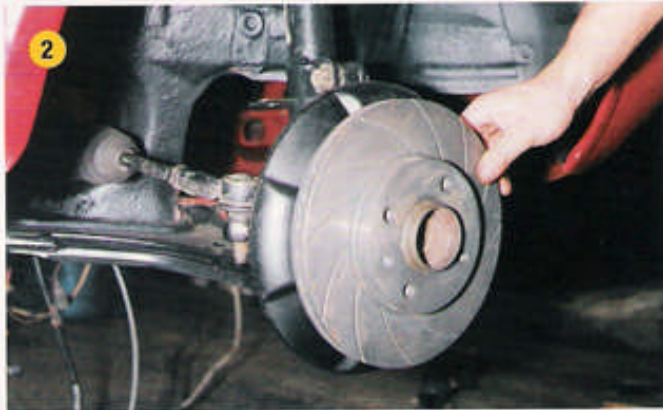
# Cabrio 'Deluxe'

In the second part of our series on improving a Golf Cabriolet, LINDSAY PORTER gets down on his knees to examine the state of his front brakes. Diagnosis? Beef them up.

**T**HERE'S BEEN A lot said over the years about Golf Mk1 front brakes – most of it unrepeatable! But I'm not convinced that Golf Mk1 brakes are as bad as people say they are. We recently restored a Mk1 GTI to 'mint' condition (and then gave it away as a competition prize connected with our colour manuals in Halfords) and, with as-new brakes, it stopped perfectly well. Mind you, that's not to say that, by today's standards, the brakes didn't match the steering (heavy!) but if you stood on them hard enough, they did the job.

However, having to try to pull the steering wheel off the column when applying the brakes doesn't suit the super-spec of our Cabrio, so we decided that the brakes had to be not just efficient but also easy-to-use. Taking a tip from TSR Performance, we decided to uprate the master cylinder (to give more 'push') and to improve both front and rear brakes. The story of the rears will have to wait until next month, but here's how we fettled the front of our car's braking system.

1. With the front strut completely built-up and the backplate sand-blasted and painted in heat-resistant paint, we tapped out the threads for mounting the discs to clean out bolt-clogging paint and sand.



2. The standard front discs were replaced with grooved Black Diamond discs, designed to produce much better stopping power than the originals. There's certainly more metal in them – though less ventilation. The manufacturers, claim that their brakes produce improved braking

performance over a wide temperature range. Time will tell!

3. After fitting the caliper carrier, you can fit the new pads and caliper after making sure that the caliper pistons are pushed back far enough to clear the pads: New discs and pads equal maximum thickness!



4. The caliper is bolted into place and, when the system has fluid in it...



5...the pads have to be pushed into proximity with the disc by working the brake pedal. Note the use of copper grease in the places where the pads rub and slide.

6. Now here's a stroke of luck! Following a tip from TSR Performance, we found that the larger master cylinder and servo from the 16-valve Golf bolts on as a direct replacement on Mk 1 models. This, according to TSR, is the single quickest simplest and most effective way of improving the brakes on a Mk 1.

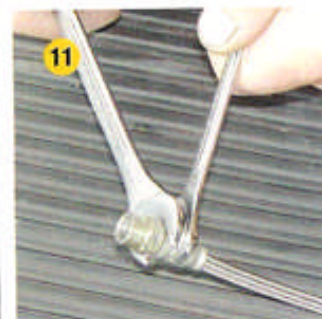
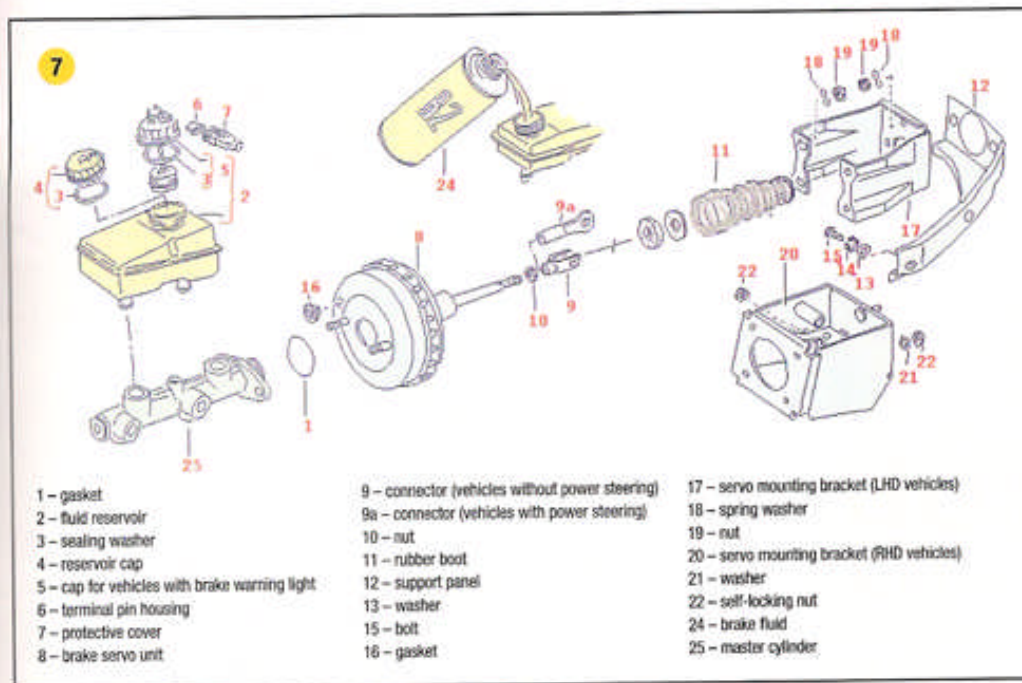


7. These, for reference, are the master cylinder and servo components. Here's how to change the servo unit:

a) On Mk 1 Golfs, the master cylinder is on the same side as the brake pedal on left-hand drive cars, whether the car is right-hand drive or left-hand drive. On Mk 2 models, the master cylinder and servo follow the brake pedal position. Here the pipework is disconnected from the master cylinder using one of the special brake pipe spanners referred to earlier.







**8.** Another way of reducing brake inefficiencies is to use stainless steel braided flexible brake hoses. Ours were obtained from Automec.

**9.** If you need to shorten a braided hose, you need to prevent it from fraying. Wrap insulation tape around it and cut with sharp side-cutters.

**10.** As you slide the female part of the connector over the hose, make sure that you don't spread the braiding.

**11.** Insert the male end and tighten the two together.

**12.** The 'de luxe' treatment even extends to the hose fixings! The hoses were sheathed in black rubber then clipped carefully to the strut so that they couldn't foul anything. We checked to make sure there was enough hose to allow full-lock in each direction!

Converting rear brakes to disc isn't quite so straightforward. Next month, we show how it's done.

b) With the wiring also disconnected from the cap, the master cylinder can be unbolted from the servo.

c) The brake linkage from the brake pedal now has to be disconnected. Put the pin back into the end of the linkage so that everything is kept together.

d) The servo support bracket is fitted to the crossbar which runs across the front of the bulkhead with two nuts and washers running on to fixed studs.

e) The servo mounting bracket itself is bolted through the bulkhead/firewall. There are three fixed studs on the bracket and three locknuts and washers located here, inside the footwell.

f) The servo and mounting bracket can now be lifted away and at this point, the operating rod is still in place, mounted on the back of the servo. Inside the mounting bracket there is a bellcrank with three swivel pins: One for the pull

rod which goes across the bulkhead; one for the clevis pin on the end of the brake servo and one for the bellcrank to swivel on.

g) On right-hand drive vehicles, the bellcrank fitted to the driver's side can now be disconnected and the crossbar unbolted from the bulkhead if needs be.

h) Be sure to lubricate thoroughly when reassembling.

#### FACT FILE: LATE CABRIO CONFLICTS

- On the post-Mk 1 Cabriolet models, i.e. those fitted with Mk 2-type brakes, some modifications to the brake lines are necessary.
- On these models, the master cylinder has two sets of outlets, one pair for the front and one pair for the rear.
- Each of the two rears has a valve to prevent rear brake lock-up fitted to it.
- The 16-valve master cylinder only has one pair of

outlets, one for each of the split circuits.

■ You have to add a T-piece (the type used on Volkswagen Beetles is fine) to each of the outlet pipes. One branch of each T-piece goes to each front brake while one branch goes to each rear brake via the two valves which are removed from the original master cylinder.

■ On earlier models - those fitted with a rear brake pressure regulator mounted on the underside of the car - this problem does not arise.

Lindsay is also M.D of Porter Manuals, the first Colour Workshop Manuals. These telephone-directory sized manuals cover a wide range of everyday cars including Golf, Polos and derivatives and are available solely through all branches of Halfords.