



## Flexible Hoses – Check them

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Flexible hoses are essential to the operation of hydraulic clutch and brake systems on cars both old and new. However, as they age, problems can arise.

Even if you are not technically minded, it's a good idea – and very easy – to visually inspect the hoses at least once a year, for signs of splitting, crazing, bulging and other obvious external damage. Bending the hose through a tight angle, by hand, will help to highlight dodgy sections. Renew in axle sets if you discover any such nasties. Hose failure and consequent fluid loss could be highly dangerous, especially if the brake system is affected...

However, sometimes troubles can develop unseen within the hoses, notably internal collapse of the hose walls, or internal disintegration. In such cases the hose may look fine from the outside, yet passage of hydraulic fluid through the hose is restricted, so the component to which the hose is connected may not be able to function as designed. Often this takes the form of correct initial operation (for example of the clutch or brakes, as fluid is forced through the restricted section of the hose under heavy pressure applied at the foot pedal), but followed by a 'lazy' return of the fluid to the master cylinder/reservoir. So, for example, brakes may be slow to release, or the clutch may slip. In severe cases, if a brake hose (say) is almost completely obstructed internally, the brakes may pull to one side, giving the impression that the caliper or wheel cylinder piston(s) on one side of the vehicle are seized or otherwise inoperative.

Before condemning the brake calipers/cylinders, or a new clutch assembly (all likely to be expensive), make sure that the flexible hydraulic hoses are in good nick.



This flexible hose from a hydraulically activated clutch system looked fine from the outside, but was almost completely choked within, due to disintegration of the internal walls. This resulted in severe clutch slip after every gearchange, due to the fluid being unable to move rapidly back through the hose to the master cylinder and its fluid reservoir