

**Haynes**
shows you how

BMW 3-Series (92-98) & Z3 (96-98) Haynes Online Manual

4 Clutch release cylinder - removal, inspection and installation

Warning:

Brake fluid is poisonous; wash it off immediately and thoroughly in the case of skin contact, and seek immediate medical advice if any fluid is swallowed or gets into the eyes. Certain types of brake fluid are flammable, and may ignite when allowed into contact with hot components; when servicing any hydraulic system, it is safest to assume that the fluid is flammable, and to take precautions against the risk of fire as though it is gasoline that is being handled. Brake fluid is also an effective paint stripper, and will attack plastics; if any is spilled, it should be washed off immediately using large quantities of fresh water. Finally, it is hygroscopic (it absorbs moisture from the air) - old fluid may be contaminated and unfit for further use. When topping-up or replacing the fluid, always use the recommended type, and ensure that it comes from a freshly opened container.

Removal

- 1 Remove the brake fluid reservoir cap, and siphon out sufficient brake fluid so that the fluid level is below the level of the reservoir fluid hose connection to the clutch master cylinder (the brake fluid reservoir feeds both the brake and clutch hydraulic systems). **Do not** empty the reservoir, as this will draw air into the brake hydraulic circuits.
- 2 To improve access, jack up the vehicle, and support it securely on axle stands.
- 3 Where applicable, remove the underbody shield for access to the transmission bellhousing.
- 4 Place a container beneath the hydraulic pipe connection on the clutch release cylinder to catch escaping brake fluid. Unscrew the fitting nut and disconnect the fluid pipe.
- 5 Unscrew the two securing nuts and withdraw the release cylinder from the mounting studs on the bellhousing (see illustrations) .

4.5a Unscrew the securing nuts . . .



4.5b . . . and remove the clutch release cylinder



Inspection

6 Inspect the release cylinder for fluid leaks and damage, and replace if necessary. No spare parts are available for the release cylinder, and if faulty, the complete unit must be replaced.

Installation

7 Installation is a reversal of removal, bearing in mind the following points.

- A. Before installation, clean and then lightly grease the end of the release cylinder pushrod.
- B. Tighten the mounting nuts to the specified torque.
- C. On completion, top-up the brake fluid level and bleed the clutch hydraulic circuit (see [Section 6](#)).