



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

18 Steering column (3-Series models) - removal, inspection and installation

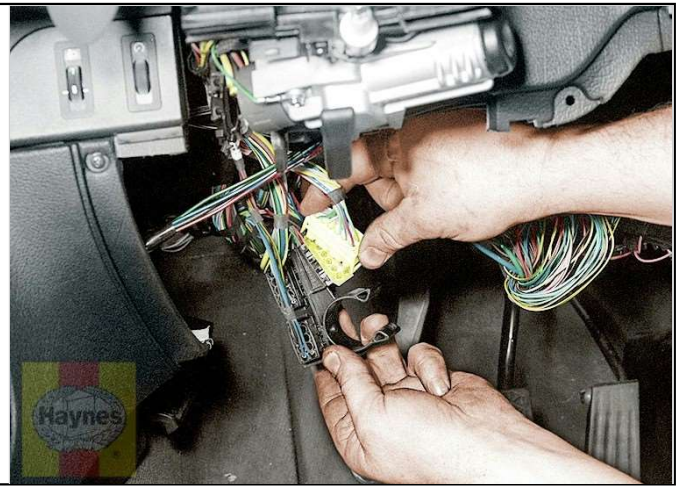
Removal

Warning:

If the vehicle is equipped with an airbag, disable the airbag system before starting this procedure (see Chapter 12) .

- 1 Disconnect the battery negative terminal. **Caution:** *If the radio in your vehicle is equipped with an anti-theft system, make sure you have the correct activation code before disconnecting the battery.*
- 2 Remove the steering wheel (see [Section 17](#)).
- 3 Remove the steering column combination switches (see [Chapter 12](#)).
- 4 Working in the engine compartment, using paint or a marking pen, make alignment marks between the lower end of the steering column and the intermediate shaft upper joint.
- 5 Loosen and remove the nut and clamp bolt, and disengage the shaft from the column.
- 6 Disconnect the wiring connectors from the ignition switch and free the harness from its retaining clips on the column (see illustration) .

18.6 Unclip the wiring connectors from the column and disconnect the ignition switch connector



7 Release the steering column lower fixing ring by rotating it counterclockwise.

8 Where necessary, loosen and remove the nut and bolt securing the column support bracket to the firewall and withdraw the spacer from the column. Also unscrew the interlock cable (if equipped) from the steering lock.

9 The steering column is secured in position with shear-bolts. The shear-bolts can be extracted using a hammer and chisel to tap the bolt heads around until they can be unscrewed by hand. Alternatively, drill a hole in the center of each bolt head and extract them using a bolt/ stud extractor (sometimes called an “easy-out”).

10 Pull the column upwards and away from the firewall, and slide off the rubber mounting, mounting seat, washer and fixing ring off from the column lower end. Remove the collars and rubber mountings from the column mountings (see illustration) .

18.10 Remove the steering column and recover the rubber mountings and collars



Inspection

11 The steering column incorporates a telescopic safety feature. In the event of a front-end crash, the shaft collapses and prevents the steering wheel injuring the driver. Before installing the steering column, examine the column and mountings for signs of damage and deformation, and replace as necessary.

12 Check the steering shaft for signs of free play in the column bushings. If any damage or wear is found on the steering column bushings, the column should be overhauled. Overhaul of the column is a complex task requiring several special tools, and should be entrusted to a BMW dealer or other qualified repair shop.

Installation

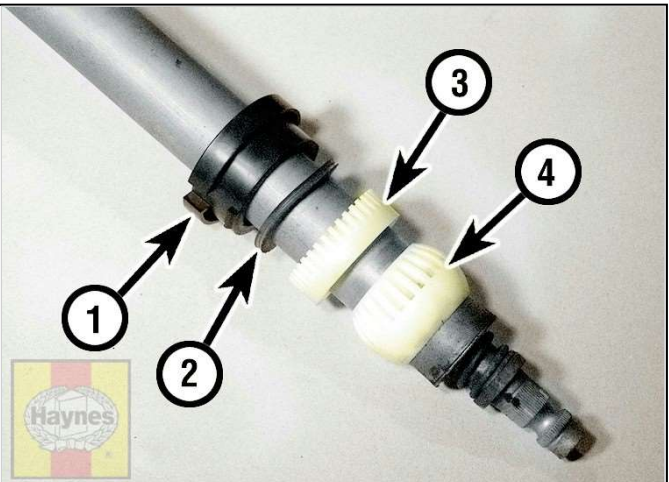
Note:

New steering column shear-bolts, and an intermediate shaft clamp bolt nut, will be required on installation.

13 Ensure the mounting rubbers are in position, and install the collars to the rear of the mounting rubbers.

14 Slide the fixing ring, washer, mounting seat and rubber mounting onto the base of the steering column (see illustration) .

18.14 Slide the fixing ring (1), washer (2), mounting seat (3) and rubber mounting (4) onto the base of the steering column . . .



15 Maneuver the column into position and engage it with the intermediate shaft splines, aligning the marks made prior to removal (see illustration) .

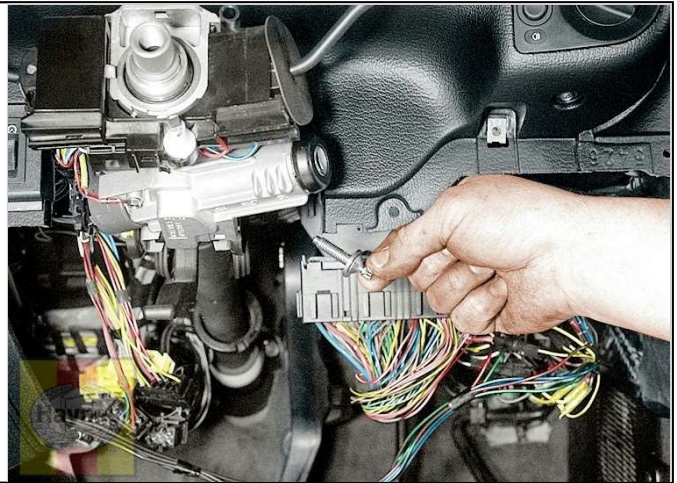
18.15 . . . and guide the column into place



16 Locate the lower end of the column in its seat and screw in the new shear-bolts, but only tighten them lightly

at this stage (see illustration) .

18.16 Seat the column in its lower mounting, and install the new shear-bolts



17 Where necessary, install the spacer, washer and bolt securing the column support bracket to the firewall and install its retaining nut.

18 Secure the lower end of the column in position by rotating the fixing ring clockwise until it clicks into position.

19 Tighten the column shear-bolts evenly until both their heads break off. Where necessary, also securely tighten the support bracket bolt.

20 Reconnect the wiring connectors to the ignition switch, and secure the wiring to the column, ensuring it is correctly routed.

21 Ensure the intermediate shaft and column marks are correctly aligned, and insert the clamp bolt. Install the new clamp bolt nut and tighten it to the specified torque.

22 Where necessary, reconnect the interlock cable to the switch and secure it in position.

23 Install the combination switches (see [Chapter 12](#)).

24 Install the steering wheel (see [Section 17](#)).