

BMW 3-Series 320i & 320xi (12-14), 325i, 325xi, 330i & 330xi (06) & 328i & 328xi (07-14) Haynes Online Manual

## 17 Steering column - removal, inspection and installation

### Warning:

These models are equipped with a Supplemental Restraint System (SRS), more commonly known as airbags. Always disable the airbag system before working in the vicinity of any airbag system component to avoid the possibility of accidental deployment of the airbag(s), which could cause personal injury (see Chapter 12).

#### Warning:

Do not use a memory saving device to preserve the PCM or radio memory when working on or near airbag system components.

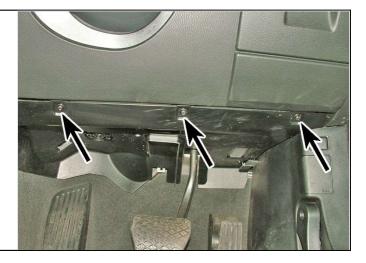
### Note:

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

### Removal

- 1 Disconnect the negative battery cable (see Chapter 5).
- 2 Remove the three Torx bolts and the driver's knee bolster panel below the steering wheel **(see illustration)**. Disconnect any electrical connectors as the panel is withdrawn.

17.2 Remove the 3 bolts and the panel (driver's knee bolster) above the pedals



3 Reach up behind the instrument panel and pull the footwell heating duct downwards from the driver's side. Detach the duct from the heater distribution housing (see illustration) . Release the wiring <u>harness</u> from the duct as it's withdrawn.

# 17.3 Unclip the driver's side footwell heating duct



4 Fully extend the steering wheel, and set it in the lowest position. Remove the steering wheel (see Section 16).

5 Using a blunt, flat-bladed tool, carefully pry the column upper cover from the lower cover. Set the column in the highest position, then press the retaining clip on each side outwards slightly, and pull the lower column cover downward. If required, unclip the upper cover from the gap cover (see illustrations).

### 17.5a Unclip the column upper shroud



17.5b Squeeze together the clips and detach the upper shroud from the boot



6 Tag and disconnect the electrical connectors from the column switches and free the <u>harness</u> from its retaining clips on the column (see illustrations). Don't overlook the connector on the top side of the column.

17.6a Disconnect the switch gear electrical connectors . . .



17.6b . . . and the connector on the top of the column



7 Slide up the rubber boot at the base of the column (see illustration) .

# 17.7 Pull up the boot at the base of the column



8 Loosen and remove the clamp bolt, then disengage the shaft from the column (see illustration). Discard the bolt; a new one must be installed.

# 17.8 Remove the clamp bolt (viewed from the engine compartment)



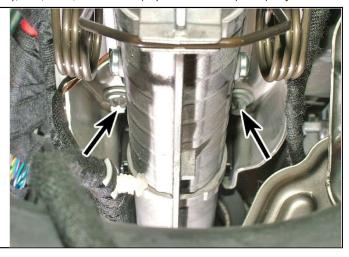
9 Remove the four mounting bolts/nuts and pull the column to the rear (see illustrations) .

17.9a Remove the upper mounting bolts . .

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### 17.9b . . . and the lower mounting bolts



### 17.9c Maneuver the column rearward



## Inspection

- 10 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 damage and deformation, and replace as necessary.
- 11 Check the steering shaft for signs of <u>freeplay</u> 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.

### Installation

- 12 Maneuver the column into position and engage it with the intermediate shaft splines, aligning the marks made prior to removal.
- 13 Move the column into position and screw in the mounting bolts, tightening them to the specified torque.
- 14 Reconnect the electrical connectors to the ignition switch and column switches. Secure the wiring to the column, ensuring it is correctly routed.

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

16 Install the rubber boot to the bulkhead at the base of the column.

17 Install the lower and upper steering column covers.

18 Install the steering wheel (see Section 16).

19 Install the footwell air duct.

20 Reconnect the negative battery cable (see Chapter 5).

21 If a new column has been installed, it will be necessary to recalibrate the steering angle <u>sensor</u> using BMW diagnostic equipment. Entrust this task to a dealer or other qualified shop.

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