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shows you how

**BMW 3-Series and Z4 (99-05) Includes 2006 325ci/330ci Coupe and Convertible models Haynes Online Manual.**

## 20 Steering column intermediate shaft - removal and installation

### Caution:

Don't allow the steering column shaft to turn while the intermediate shaft is removed.

### Note:

New intermediate shaft clamp bolts will be required on installation.

## Removal

1 Chock the rear wheels, firmly apply the hand-brake, then raise the front of the vehicle and support on jackstands. Set the front wheels in the straight-ahead position. Remove the screws and remove the engine splash shield.

2 Using paint or a suitable marker pen, make alignment marks between the intermediate shaft universal joint and the steering column, the shaft and flexible coupling, and the flexible coupling and the steering gear pinion.

**Note:** On some models an alignment mark is already provided on the pinion flange, which aligns with a mark cast into the pinion housing (see illustration 21.3) .

3 Loosen and remove the clamp bolts, then slide the two halves of the shaft together and remove the shaft assembly from the car (see illustration) .

### 20.3 Steering column intermediate shaft upper clamp bolt



4 Inspect the intermediate shaft universal joint for signs of roughness in its bearings and ease of movement. Also examine the shaft rubber coupling for signs of damage or deterioration, and check that the rubber is securely bonded to the flanges. If the universal joint or rubber coupling are suspect, the complete intermediate shaft should be replaced.

## Installation

5 Check that the front wheels are still in the straight-ahead position, and that the steering wheel is correctly positioned.

6 Align the marks made on removal, and engage the intermediate shaft joint with the steering column and the coupling with the steering gear.

7 Insert the new clamp bolts, and tighten them to the specified torque setting. Lower the car to the ground.

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