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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.**

## 3 Steering knuckle - removal and installation

### Warning:

Dust created by the brake system is harmful to your health. Never blow it out with compressed air and don't inhale any of it. Do not, under any circumstances, use petroleum-based solvents to clean brake parts. Use brake system cleaner only.

### Note:

New suspension strut-to-knuckle bolt, and tie-rod balljoint and lower arm balljoint nuts, will be required on installation.

## Removal

1 Firmly apply the parking brake, then raise the front of the vehicle and support it securely on jackstands. Remove the relevant front wheel.

2 If steering knuckle is to be replaced, do not attempt to reuse the hub assembly (see [Section 2](#)).

3 If the steering knuckle is to be reinstalled, loosen and remove the two bolts securing the brake caliper mounting bracket and then slide the caliper assembly off the disc. Using a piece of wire or string, tie the caliper to the front suspension coil spring, to avoid placing any strain on the hydraulic brake hose. On models with ABS, also remove the wheel sensor (see [Chapter 9](#)).

4 Loosen and remove the nut securing the tie-rod balljoint to the steering knuckle and release the balljoint tapered shank using a universal balljoint separator.

5 Unscrew the lower arm balljoint nut, and release the balljoint tapered shank from the knuckle using a universal balljoint separator.

6 Loosen and remove the bolt securing the suspension strut to the knuckle. Slide the knuckle down and off from the end of the strut. To ease removal, insert a large screwdriver into the slot on the back of the steering knuckle and slightly spread the it's clamp ([see illustration](#)) . Take care to spread the clamp only as much as absolutely necessary, as excessive force will cause damage.

**3.6 Use a large screwdriver to gently spread the clamp**



7 Examine the steering knuckle for signs of wear or damage, and replace if necessary.

## Installation

8 Prior to installation, clean the threads of the strut-to- steering knuckle bolt hole by running a tap of the correct thread size and pitch down it.

9 Engage the knuckle with the lower arm balljoint stud, and install the new retaining nut.

10 Position the knuckle on the suspension strut, ensuring that the locating pin on the strut slides into the slot in the knuckle's clamp (see illustration) . Slide the knuckle up until it contacts the stop on the strut. Install the new strut-to-knuckle bolt and tighten it to the specified torque.

**3.10 Ensure that the locating pin slides into the slot in the clamp**



11 Tighten the lower arm balljoint nut to the specified torque.

12 Engage the tie-rod balljoint in the steering knuckle, then install a new retaining nut and tighten it to the specified torque.

13 If a replacement steering knuckle is being installed, install a new hub assembly (see [Section 2](#) ).

**14** On models where the hub was not disturbed, slide the caliper into position over the disc, making sure the pads pass either side of the disc. Clean the threads of the caliper bracket mounting bolts prior to installation and tighten them to the specified torque setting (see [Chapter 9](#)).

**15** Reinstall the wheel, then lower the car to the ground and tighten the wheel bolts to the torque listed in the [Chapter 1 Specifications](#) .

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