

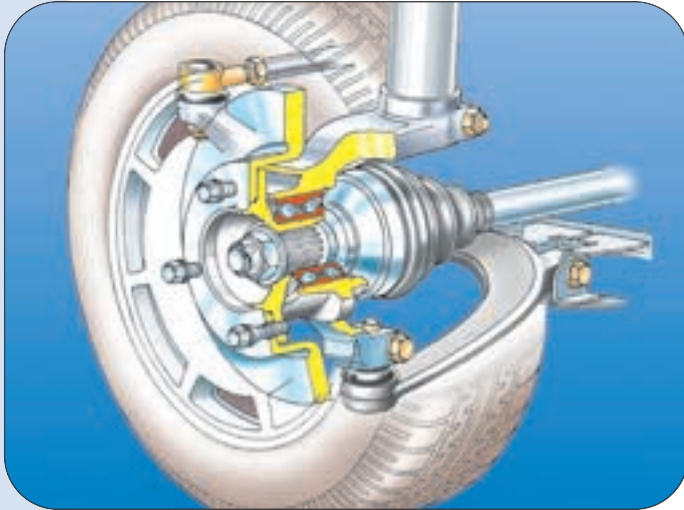
# Hub units – fitting guidelines

## Fitting instructions for hub bearing replacement in passenger cars.

When mounting or adjusting hub bearings, it is extremely important for the safety of the

vehicle, as well as for the operation of the bearings, that the shop manual for the vehicle concerned is followed in detail. Due to differences in car construction, the following guidelines are only of a general technical nature.

When replacing bearings, it is essential that the correct mounting methods are used, that proper tools are used, and that clean procedures are observed in handling and installing all components, particularly the bearings. Do not open the bearing package until you are ready to install the bearing. Let the rust preventive compound remain in the bearing during mounting.



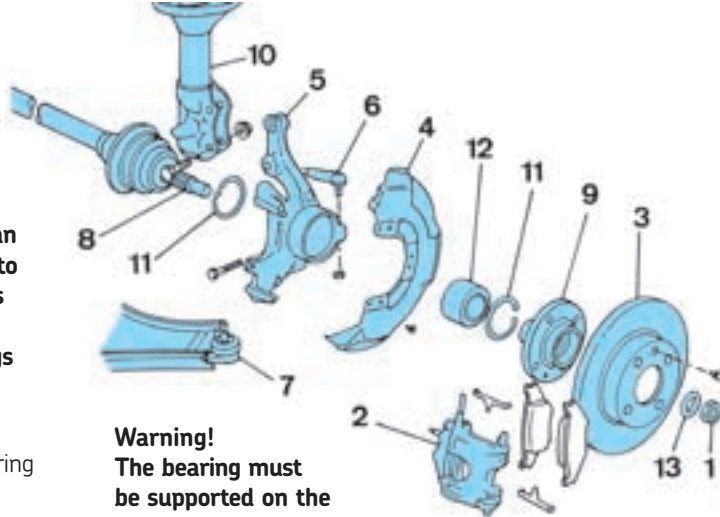
Double row angular contact ball bearing  
– Hub Bearing Unit 1 –

## Removal

1. Chock one wheel of the car to prevent the car from moving.
2. Slacken the axle nut (1) and the wheel bolts or nuts, with the car wheels on the ground.
3. Jack up the car and support it with axle stands **(Warning! Axle stands must be used, to avoid risk of personal injury)**. Remove the wheel.
4. Remove the brake pads and suspend the caliper (2) out of the way, without disconnecting the flexible supply hose.
5. Remove the brake rotor. (3)
6. Remove the cover plate (4) (if present).
7. Remove the axle nut (1). (Some cars have a screw and internal thread on the drive shaft).
8. Separate the knuckle (5) from the steering track rod end (6), the lower suspension arm (7) and the stabilizer bar (if it is attached to the knuckle after the strut).
9. Swing the knuckle (5) out to clear the axle shaft (8) from the hub (9) while making sure that the axle shaft remains in position in the transmission.
10. Remove the knuckle (5) from the strut.(10)
11. Remove the sealing ring (if applicable).
12. Remove the circlips (11) or other fixing elements. Circlips can be located internally in the knuckle, or externally, on the bearing.
13. Press out the hub (9) using special tools, or press, and a suitable mandrel.
14. Remove the bearing inner track from the hub with an external bearing puller.
15. Reinstall the inner ring track into the bearing and pull out the bearing (12) from the knuckle using a special tool, or a press with a suitable mandrel. (If the knuckle is fitted with double circlips, the operation can be done without reinstalling the inner track – simply apply the force to the outer ring!).

# Installation

1. **Warning! The two inner ring halves must at all times be kept together in the bearing assembly, otherwise the bearing will be irreparably damaged! If the bearing assembly is fitted with an internal plastic sleeve, (to keep the two inner rings together in the bearing assembly) the inner rings must be chocked when the sleeve is ejected.**



**Warning!**  
The bearing must be supported on the inner ring during this operation, to avoid severe damage to the bearing.

2. Lightly oil the internal bearing seat of the knuckle (5).
3. If the bearing is of an unsealed and ungreased type, fill the bearing with a clean high quality Lithium based grease.
4. If the knuckle is fitted with two internal circlips, install the outer circlips.
5. Press the new bearing (12) fully into the knuckle (5) using a special tool, or a press and a suitable mandrel. **Warning! The press force must be directly applied to the outer ring of the bearing, otherwise severe damage will be caused to the bearing.**
6. Install the second circlip (where applicable).
7. Install the sealing ring (where applicable). Grease the sealing lip.
8. Take the knuckle (5) (with the bearing in position), press the hub (9) into the bearing using special tools, or, support the bearing on the inner ring and press the hub in position in a press.
9. Refit the knuckle (5) on the strut (10) and tighten the attachment fixings to the specified torque load.
10. Push the strut (10) back and push the hub (9) on the axle (8), using a sleeve to push on the inner ring of the bearing to avoid pushing out the outer inner ring half.
11. Connect the suspension arm (7), the track rod end (6), and the stabilizer bar (if removed), and tighten to the specified torque load.
12. Replace the thrust washer (13) if applicable, and refit the new axle nut. If full torque load is applied at this stage the hub must be prevented from turning by a lever engaged on two of the wheel studs. **Warning! Never loosen or tighten the axle nut (or screw) by using the brake! (The axle nut may also be tightened to full torque load with the car wheels on the ground).**
13. Refit the cover plate (if applicable).
14. Refit the brake disc rotor and tighten the screw (or screws) to the specified torque.
15. Refit the brake caliper and other brake members. Tighten the attachment screws to the specified torque.
16. Refit the wheel and lower the car.
17. Tighten the wheel nuts (or bolts). Tighten the axle nut (or screws) to specified torque (if not already done) and lock the nut in the shaft slot (if applicable). Please notice: No clearance adjustment is required for this type of bearing!
18. Remove the wheel chocks.