

Installation and Removal of Wheel Bearings: How to proceed?

We go on with our topic dedicated to the installation of wheel bearings. In this issue we will look at non-driving rear wheels, and consider two types of bearings:

- Cartridge double-row tapered-roller bearings,
- Hub double-row ball bearings.

Cartridge Bearing
Driving Front Wheels

Cartridge Bearing
Non-Driving Rear Wheels

Hub Bearing
Non-Driving Rear Wheels

ASB® Bearing
Wheel Speed Sensor



*Cartridge Bearing with
Two Rows of Tapered Rollers*



*Hub Bearing with
Two Rows of Balls*

Cartridge bearings with two rows of tapered rollers are used for the non-driving rear wheels of compact and mid-size vehicles. They are usually mounted in "drum-brake hubs", and sometimes in "disk-brake hub".

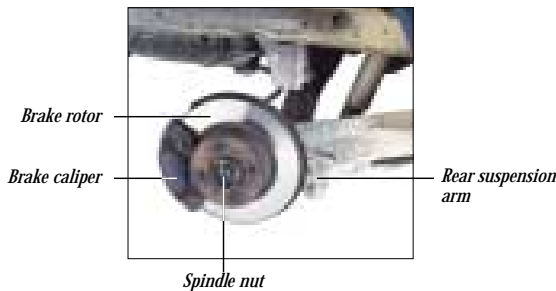
Hub bearings, also called "single-flanged bearings", integrate the hub function in their outer ring, to which the brake rotor and the wheel are directly attached. This solution, which facilitates assembly and increases reliability, is mainly used on the non-driving rear wheels of upper mid-size vehicles.

Note: The last page gives important recommendations regarding the installation of wheel bearings and provides a list of vehicles and kits corresponding to the two types of assemblies discussed in this document.

Hub Bearing Non-Driving Rear Wheels

I. REMOVAL

- 1 Remove in sequence:
 - the brake drum or the caliper and rotor, the hub cap and the spindle nut.
 - the hub bearing (by hand or with a bearing puller).

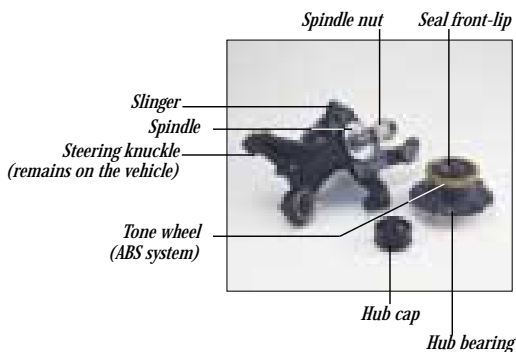


II. INSTALLATION

- 2 Before installing the new bearing, check the overall condition of the spindle and the cleanliness of all surfaces that will contact the bearing. The SNR kit contains all parts necessary for assembly. Sometime, a sheet metal slinger ring is mounted on the steering knuckle. In this case, the bearing seal should have a front lip that rides against this slinger ring. Do not remove the slinger ring.

- 3 If the seal has a front lip, apply a bead of grease under the latter. Install the hub bearing on the spindle either by hand or with a threaded chuck positioned at the end of the spindle.

- 4 With a torque wrench, tighten the new spindle nut to the torque recommended by the car manufacturer. Re-install the hub cap. Re-attach the brake drum or the rotor and caliper.



Cartridge Bearing Non-Driving Rear Wheels

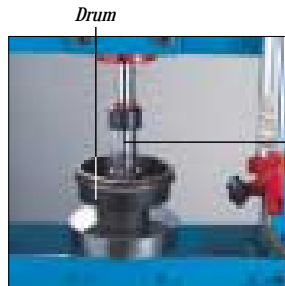
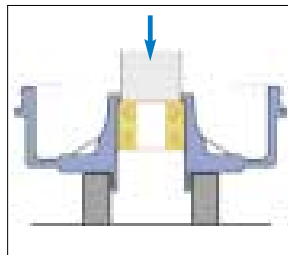
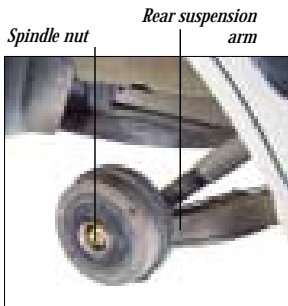
I. REMOVAL

1 Remove in sequence:
 - the hub cap,
 - the spindle nut,
 - the brake drum or the rotor and caliper.

2 Extract the snap ring with pliers. Place the outer face of the drum (or rotor/hub) assembly on a large-section tube. To prevent potential distortion, select the diameter of the tube so that it supports the drum or rotor hub assembly as close to the bore as possible.

3 Using a bench press and a sleeve of suitable diameter, apply pressure to the outer ring of the bearing. Heavy pressure is often required to unseat the bearing.

If the outer ring is not accessible, apply pressure to the inner ring. In this case, be careful not to damage the bearing housing.



Sleeve for pressing down the bearing outer ring

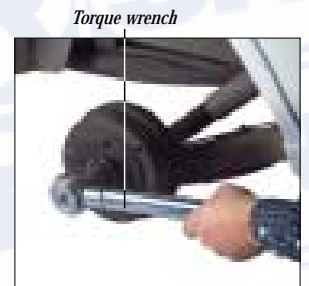
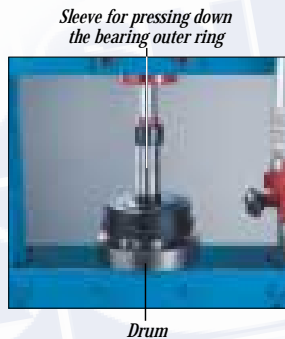
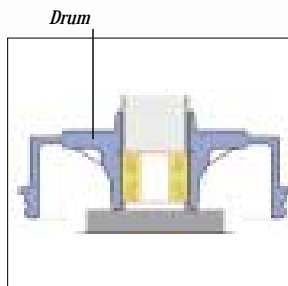
II. INSTALLATION

4 Before installing the new bearing, check the overall condition of the drum or rotor hub and the cleanliness of all surfaces that will contact the bearing. The SNR kit contains all parts necessary for assembly.

5 Place the drum (or rotor) hub on a support so that it rests on the side opposite to the direction of installation (see sketch). Do not apply pressure to the outside diameter of the drum (or rotor) hub.

6 Using a bench press and a sleeve of suitable diameter, apply pressure (4 to 5 tons) to the outer ring of the bearing. Re-install the snap ring.

7 Install the assembly on the vehicle. With a torque wrench, tighten the new spindle nut to the torque recommended by the car manufacturer. Re-install the hub cap. Re-attach the brake drum or the rotor and caliper. For a rotor hub assembly, re-install the brake caliper.



Hub Bearing
Non-Driving Rear Wheels

Cartridge Bearing
Non-Driving Rear Wheels

PRECAUTIONS TO TAKE WHEN INSTALLING BEARINGS

1. Always refer to the technical manual of the vehicle.
2. Prepare all necessary equipment and tools before starting installation. Make sure they are clean and in good working condition.
3. Verify the kit part number. Remove the bearing from its packing at the last moment, and always place it on a clean workbench.
4. Clean parts and components that are in the vicinity of the bearing and check they are in proper condition. Check particularly that the hub, steering knuckle and driveshaft are free of scratches, scoring or indentations. Replace any damaged parts.
5. Do not remove or damage parts that are not provided with the kit (e.g. slinger ring).
6. **Never remove or separate the components of a bearing.**
7. To ensure a correct bearing installation, use a press (approx. 10 tons capacity).
8. Always apply the load to the ring that is being fitted. The fitting load must never be transmitted through the rolling elements (balls, rollers). Never apply pressure to both rings at once.
9. Apply the torque values recommended by the car manufacturer.

Cartridge Bearing with 2 Rows of Tapered Rollers

For information only; always refer to the SNR catalogue

Makes	Models	SNR Kits
CITROËN	AX, Saxo, ZX	R159.19
MAZDA	626	R170.15
MERCEDES	Classe A, Sprinter	R151.32-R154.46
PEUGEOT	106, 205, 306	R159.19
RENAULT	Twingo, Clio, Megane, Laguna, Express, Master	R155.17-R155.19-R155.27 R155.63-R155.65
ROVER	111, 114, Metro (front wheel assembly)	R161.10
VOLKSWAGEN	LT	R154.46



Hub Bearing

For information only; always refer to the SNR catalogue

Makes	Models	SNR Kits
ALFA ROMEO	145/146, 155	R158.21-R158.22-R158.39
AUDI	A6	R154.44
BMW	Series3 - Series5 - Series7 (front wheel assembly)	R150.15-R150.17-R150.20
CITROËN	BX, Xantia, XM, C15, Berlingo	R159.15-R166.24
FIAT	Punto, Bravo/Brava, Marea	R158.22-R158.39
HONDA	Civic	R174.19
PEUGEOT	306, 405, 406, 605, Partner	R159.15-R159.34-R159.35 R159.36-R166.24
RENAULT	Clio, Mégane, R21, Espace, Express	R155.24-R155.25-R155.39 R155.40-R155.51-R155.56-R155.99
ROVER	200	R174.19

