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How to Service **WHEEL BEARINGS**



This workshop procedure guide contains:

Step-by-step instructions on how to service wheel bearings.

Personal safety:

Whenever you perform a task you must use personal protective clothing and equipment that is appropriate for the task. Among other items, this may include:

- Work clothing, such as overalls and steel-capped footwear.
- Eye protection, such as safety glasses and face masks.
- Ear protection, such as earmuffs and earplugs.
- Hand protection, such as rubber gloves and barrier cream.
- Respiratory equipment, such as face masks and valved respirators.

TIPS ON SERVICING WHEEL BEARINGS

Safety check:

- Make sure that you understand and observe all legislative and personal safety procedures when carrying out the following tasks.

Points to note:

- The basic procedure when servicing the non-driving wheel bearing is the same for rear wheel and front wheel drive vehicles.
- You must refer to the manual for any special procedures or precautions that need to be followed during the procedure.
- Wheel bearings are lubricated with grease, which also protects the metal from corrosion and helps conduct heat. Wheel bearings need to be cleaned and re-greased every 50-thousand kilometres. It is good practice to do one side at a time, to prevent mixing up any components.

- Pieces of the bearing may have broken off, resulting in a high-pitched sound while driving. This is called "sapping".
- A low-pitched sound while driving is caused when the bearing race has indentations from shock loads. This is called "brinelling".
- Wheel bearings require a lubricant that is capable of withstanding high temperatures and pressures. Normal chassis grease does not possess these properties, so you must use the manufacturer's recommended wheel bearing grease, or you risk premature bearing failure.

Servicing Wheel Bearings

1. Prepare the vehicle



Prepare the vehicle by having it in a raised condition and at a comfortable working height...



... the road wheel removed and the brake unit stripped to enable the hub to be dismantled.

2. Remove the bearing hub assembly



Pry off the dust cap, and remove the locking device. This is usually a cotter pin through the nut and spindle.



Remove the retaining nut and washer...



... clean them and place them in a safe place ready for reassembly.



When removing the hub, be careful not to get any of the grease on the brake shoes if they are still in position.

3. Remove the hub seal



Using a long dowel or drift, and using a hammer gently drive on the front of the inner hub bearing from inside the hub unit.



This will push the bearing out, and also remove the oil seal. It is good practice to renew the oil seal when you service the bearings.

4. Clean and check the old bearings



Use a paper towel to wipe all of the old bearing grease from the spindle, and the hub dust cap.



Clean the bearing with solvent, and air dry on a paper towel or blow it dry with compressed air.



Clean out any grease in the hub, and dispose of the grease in an environmentally friendly manner.



If you use an air blower as part of the cleaning process, be careful not to blow the old, dirty grease into the bearing or let the bearing spin.

5. Inspect the bearing

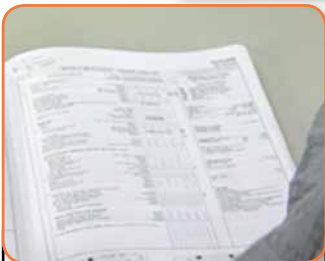


Inspect the bearing and its housing, which is called the "bearing race," for damage.



If you see any pitting or obvious damage, replace the bearing and the bearing race. These must be replaced as a set.

6. Repack grease into bearing



Check your repair manual to see which grease is recommended for the vehicle and its application. The most common method is to pack the bearings by hand.



Put a small amount of grease in the palm of your hand.



Work the grease into the large open end of the bearing until it oozes out the opposite side, then spread a fresh layer of grease all around the bearing...



... and on the bearing races.



Place the freshly greased bearing on a paper towel.

7. Grease inside of the hub and dust cap



Put a small amount of grease in the cavity of the hub.



Also, pack some grease into the dust cap. Fill it about one-third, not all the way up.

8. Re-install the bearings and seal



Re-install the bearing. Leave a ring of grease below the bearing race to help keep the fresh grease inside the bearing area after it heats up.



Before installing the new seal, ensure it is the right size to go over the spindle, by checking its diameter with the old oil seal that was removed from the hub.



Install the new seal with its sealing lip facing towards the bearing, with a recommended seal-installing tool.



Carefully tap on the installer tool ensuring that the seal goes in straight.



Lightly lubricate the seal lip.

9. Inspect the sealing area of the spindle



Inspect the sealing area for any signs of wear or damage.



If the seal area is worn, grooved or damaged, it will affect the sealing function, the seal will need to be replaced.



10. Re-install bearing hub assembly



Slide the hub assembly onto the spindle and ensure it sits on the sealing area.



Put the outer bearing in place...



...add the washer and retaining nut, and screw it up by hand until it just touches the back of the outer bearing.



Now tighten, or pre-load the bearing, in accordance with the specifications in the vehicle's manual.



Re-install the brake assembly and check that the job is secure and within manufacturer's specifications prior to replacing the road wheel.

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