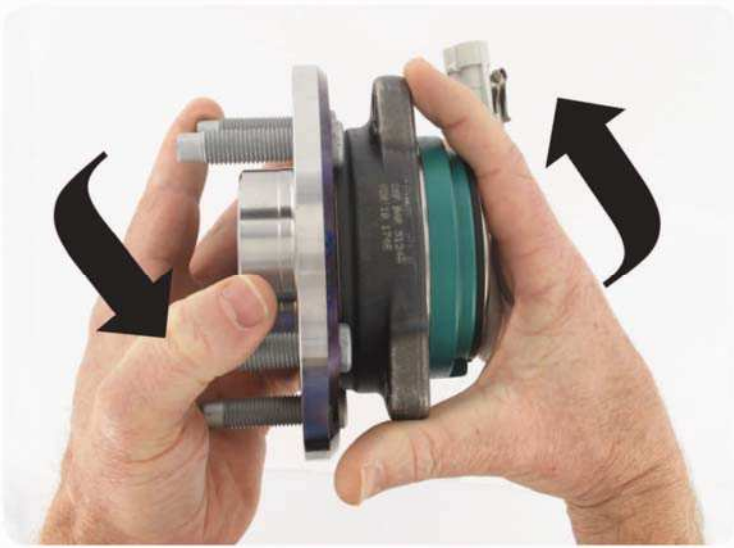


Rough or hard rotating hub bearings

Tech tip

Over recent years there have been concerns about new hub bearings being rough or hard to rotate out of the box. Many technicians will inspect a new replacement hub bearing visually and by rotating the assembly once or twice by hand.



During this process it is not abnormal to feel a roughness or grittiness as the two halves rotate. **This condition is not an indication of a defective bearing; these hub units should not be returned as suspected defective parts.**

This condition is caused by the premium grease that SKF uses in many of our bearings, and especially in our hub bearings. SKF uses a grease that provides a significant advantage over other standard greases. Our grease contains many performance enhancing additives, some of which are in the form of soft crystalline structures when the grease is new. These crystalline structures can create a roughness feeling when the hub bearing is first turned by hand, before the bearing has experienced significant rotation.

Rough or hard rotating hub bearings – cont.

These additives are important to optimum wheel bearing performance and include anti-brinelling and extreme pressure performance enhancers and solid lubricant components. They also help to keep the balls or rollers from touching the raceways during transportation of the bearing prior to installation. Without this substance, the balls or rollers can vibrate and actually wear small grooves (false brinelling) in the raceways. These wear areas will shorten the bearing life and lead to early failures. Many OEM customers require that we use this type of grease, and they often will perform a railway simulation test to assure that false brinelling doesn't occur.

Even though the bearing may feel rough when it is initially rotated by hand, after rotating on the vehicle for a few minutes, the soft crystalline structures in the grease will break down into finer structures and the bearing will rotate smoothly. There is no detrimental effect of this grease "running-in" phenomenon. This is the normal and desired behavior of this type of grease.

Another item that may contribute to a hard turning hub bearing is the seal. In some hub bearings, the seals also have more interference with the bearing. Once the bearing is rotated for a few minutes, the bearing will gradually turn freely. This is a normal situation.

As a reminder, Generation 3 hub assemblies need to be fully preloaded/seated with the correct torque in order to operate properly. Without the proper bearing seating on a hub assembly, the bearing may have a feeling of roughness when turning it. The rough feel is more noticeable in bearings which are preloaded from the factory, as many of these newer generation hub units are. Always remember to follow the OE manufacturer's recommended torque specification and procedures when installing the axle nut. This will create the correct preload for the hub assembly.