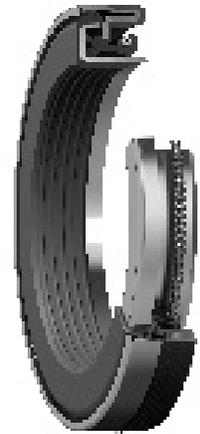




A grain of sand causes enormous damage



Machine availability is all about the right bearing

A bearing is the heart of your machine and ensures trouble-free operation of rotating parts. A bearing is the silent force of your machine. But what is the exact function of the bearing? As long as the machine keeps rotating, nothing is wrong. As soon as the bearing fails, it becomes painfully clear that the bearing is more than just a part. A bearing can make the difference between downtime and production, between making money or losing profit.

It's the beginning of August. The sun is shining and the sky is clear blue. Perfect conditions to take the grain off the land. We just have to keep working, because at the end of the afternoon a strong thunderstorm is predicted. Hectare after hectare is harvested without any problems. But then, halfway through the afternoon, things go wrong. You hear a strange sound and you feel a slight vibration through the machine. Something's wrong, but what?

The sound is coming from the front of the machine. Is there something in the mowing board? Did you hit something? You turn off the machine and check the mowing board and soon you see that a bearing has fallen out. You don't have time to find out what caused it. The bearing jammed and you need to replace it as soon as possible. Downtime is a waste of time and costs a lot of money. Fortunately, you stopped in time; after all, the risk of fire is real in these dry conditions.

On your phone you can see that the rain is approaching while there are still many hectares waiting for you. In the workshop you dismount the bearing and replace the bearing with a new one. The defect has been fixed, but in the meantime you can already hear the first drops falling on the roof of the workshop. The failure of the bearing has become an expensive joke. All the more reason to investigate how this could happen, but even more important, how to prevent this from happening in the future.

24/7 machine availability is crucial, especially at this time of year.

Keeping dirt out

Choice of material, fitting, sealing, mounting, lubrication and maintenance. All factors that determine the service life of a bearing. If all these factors are fully adjusted to the operating conditions, a bearing can achieve its theoretical service life. But often there is still a lot of room for improvement. In many cases, a standard solution is chosen, such as a low-cost bearing, a multipurpose lubricant or a standard seal. Today's arable farming has high demands, which vary from application to application. For example, a bearing in a tractor must meet different requirements than a bearing in a combine harvester, sprayer or seeder. An incorrect bearing can lead to unexpected downtime.

And then production stops, which can have a negative impact on your income. Moreover, you are faced with unexpectedly high costs. And you want to avoid that. The new app SKF Bearing Assist can help you to determine the right bearing, how to mount it and thus how to get the most out of your machine.

Causes of preliminary bearing failure

You can't always prevent bearing failure. Yet you have influence on many things. For example, around 16 percent of bearings fail prematurely due to incorrect assembly, i.e. even before the real work begins. Furthermore, about 50 percent of the bearings fail due to poor lubrication or contamination of the bearing. For this reason, bearing seals are very important in arable farming. After all, the bearings are daily exposed to dust, water, mud, crop fibres and other dirt; materials that must not penetrate the bearing under any circumstances.

Even a grain of sand is many times larger than a lubricating film in the bearing. A grain of sand can damage the bearing's raceway, resulting in bearing damage. The seal must also be suitable for high-pressure cleaning of the machines.

On our website you will find more info on the importance of lubrication and seals. The fourth important reason for bearing failure is fatigue, or aging of the material. This cannot always be prevented. Corrosion often occurs when bearings are removed from their packaging and put back unused. Corrosion can also occur in the bearings when machines are stationary for a longer period of time during the winter period. Corrosion is a common form of bearing damage. And the annoying thing is that you only notice this when you start using the machine again.

The importance of this is increasingly recognised by machine manufacturers such as New Holland. "Maintenance is a kind of standstill and our customers don't like that. That's why we choose suppliers such as SKF who prevent downtime and thus reduce machine downtime," says Marcel Verhoeven, innovation manager at CNH.

600,000 tonnes of steel

SKF produces about half a million bearings per hour. From large bearings for ships and windmills to the smallest bearings for your shaver or coffee maker. Every year SKF processes around 600,000 tonnes of steel. "SKF sets high quality standards of its own, because SKF bearings have to meet the extremely strict quality requirements that apply within the agricultural and food processing industry. That is why SKF annually invests a lot of money in research & development".