

SKF Railway



Tailor Train Performance to Your Needs

Increasing demands on efficient train operations put increasing demands on components and technology. How do you get the performance you need?

New developments in bearing technology, efficient service offers, and modern business arrangements help you hit the sweet spot between cost and performance. By picking and choosing between the different solutions, you can tailor a perfect combination for your needs.

Flexible Bearing Technology Options

Even if bearings have been in production for well over 100 years, they are under constant development.

For some of the latest updates on wheelset bearings, SKF engineers

have put extra effort in fine-tuning the contact areas between the rollers and the raceway and between the roller face and the inner ring flange. They have pushed friction even lower than before with optimised geometries, improved raceway profile, optimised flange angle, and improved surface roughness. Lower friction results in lower operating temperatures,



which further enhances the preconditions for lubrication.

The bearing material itself is also under constant scrutiny. By refining the case-carburised process during bearing production, SKF has increased material strength and performance.

Correct Lubricant Is Key

Another essential aspect when pushing performance is lubrication. As extended maintenance intervals put demanding conditions on both wheelset bearings and the lubricant, a thorough selection is needed to choose the right combination of bearings and grease. This process can consist of several screening steps combining complete bearing tests, ranging from small-size bearings to actual

wheelset bearings, with thorough grease and surface analysis.

What grease to use is one thing, but what to do when there are not enough types of lubricants to choose from? Working together is the answer. Through collaborations between bearing manufacturers and lubricant producers, new specialised lubricants can be developed faster, drawing on expert knowledge from both sides.

Keeping the Lubricant Where It Should Be

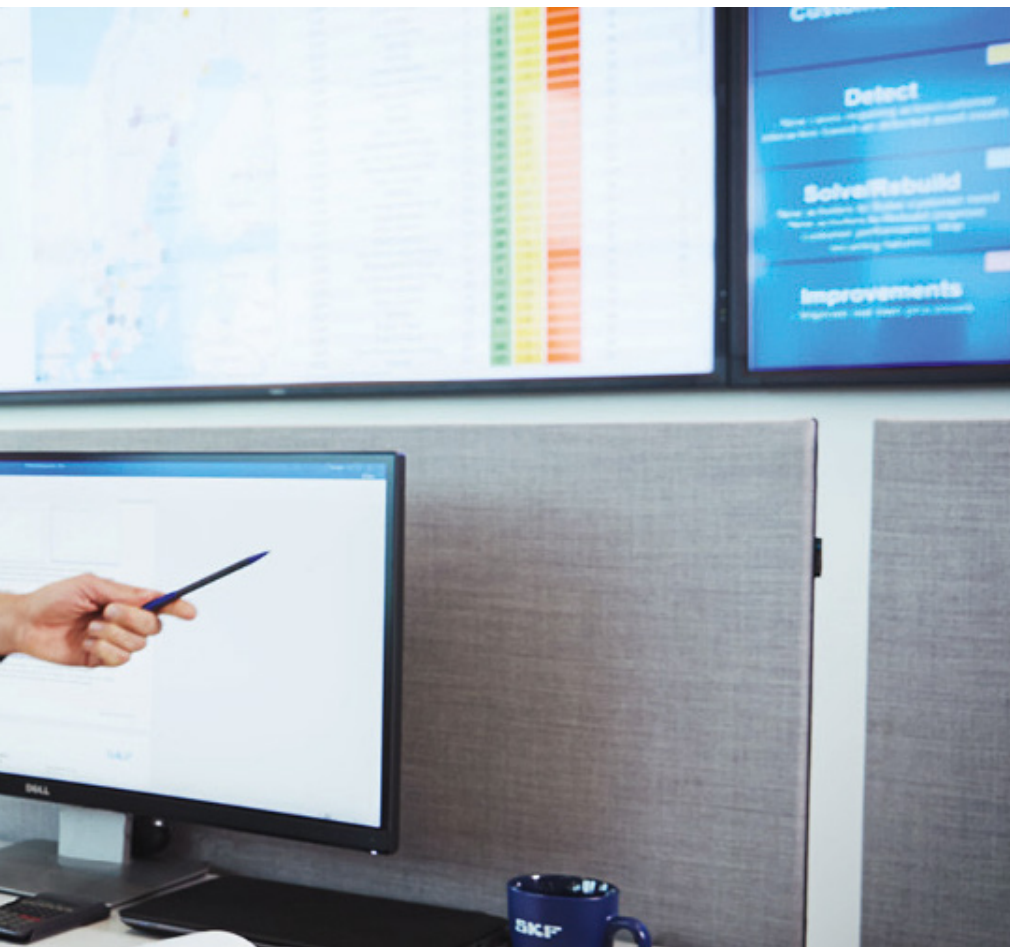
Once the lubricant is chosen, you need to make sure that it stays where it should be. A new grease retainer increases the quantity of grease in the bearing unit. It keeps the lubricant in the bearing's central area and releases oil to

rolling contacts, ensuring optimal lubrication over an extremely long bearing lifetime.

By adding the right seal, you can be sure to keep the grease in and contaminations out while keeping seal friction under control. A newly developed centrifugal lip seal works as two seals in one. At rest and low speeds, it works as a contacting seal and at high speeds as a labyrinth seal, making sure grease always stays in the bearing, and friction at a minimal level even at high speeds.

Service Solutions that Give You Control

The correct bearings and lubrication are necessary to push train performance. But to get the reliable rotation you need, add one or more of the services that



Combine Solutions to Get the Proper Performance

By choosing from these technical and service solutions, you can maximise rolling stock availability through extended maintenance intervals, and short service stops when needed. And you can minimise maintenance costs by only replacing what needs to be replaced and refurbishing rather than buying brand new parts. With bearings, condition monitoring, refurbishing, remote diagnostics, and other products and services from SKF, you can take your maintenance competitiveness to the next level.

Pay for Performance, Not Bearings

By adding a flexible business contract, you get access to technology and knowledge for a fee, moving the investment cost from capital expenditure to operational expenditure. With such a contract, you can purchase mechanical reliability and availability as a service instead of buying products and systems. Bearing developments and flexible contracts make it possible to choose the performance you need and reach KPIs while reducing risk.

The future is flexible. You decide what performance you need, and together with SKF, you build your offer with bearing technology, service solutions, and business agreements that fit your business.

help performance stay on top throughout the bearing lifetime.

Condition monitoring is an obvious first. It helps to reduce the risk of failures, improves reliability, and shifts from time-based to condition-based maintenance. Depending on your situation, you choose the solution that fits you best. Insight Rail is well suited for retrofitting on existing rolling stock, while IMx-Rail is an advanced multilog online system mounted on the bogie level or inside the train. An Axletronic temperature monitoring system helps you detect speed and other operational parameters.

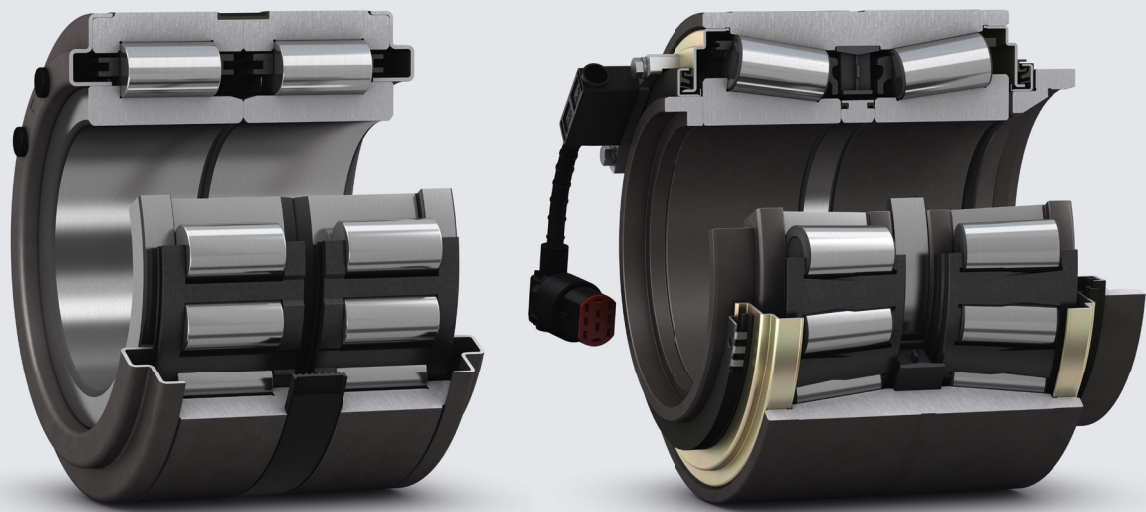
With the help of bearing remanufacturing, you can save up to 55% compared to the cost of new bearings while you reduce environmental impact through material and energy savings. You

can also shorten lead times by implementing predictive stock-keeping that depends on your typical bearing scrap rate.

By using a proven SKF method, you can confidently extend maintenance intervals with your current bearing choice. With any extension of the maintenance interval, the bearing moves closer to the area of increased probability of failure in operation. The risk that we will get to this dangerous area can be mitigated with a preliminary and final assessment of the risk associated with extending the maintenance intervals for railway wheel bearings. The preliminary step deals with evaluating existing application data. The final step is to sample and measure the health of a population of bearings once the previously approved interval has been passed.

Click or scan the QR code to discover our online tool and get the performance you need





How far do you want to take your train performance?

With the help of recent technological advancements, you can extend train performance beyond what was recently thought to be the limit. A new generation of bearings from SKF lets you choose any maintenance interval without having to worry about failure due to under-engineered bearings or about excessive cost due to over-engineering.

Now you can get the level of maintenance competitiveness, reliability, and lifecycle cost that your business demands.

In a partnership with us, we examine your needs and choose a combination of technical, service, and business solutions that take your train performance as far as you need.

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