



Industrial bearing remanufacturing services from SKF

Extending the service life of bearings to reduce costs, downtime and environmental impact



The Power of Knowledge Engineering



Why bearing remanufacturing service?

Wear, rust, indentations, microcracks... Certain application conditions, like contamination or sporadic metal-to-metal contact in the rolling contact zone, can cause all sorts of damage to your bearings. As a result, the service life of a bearing is often shorter than the calculated rating life.

The alternative is to apply a controlled remanufacturing process before any major damage or bearing failure occurs. This can substantially prolong the service life of the bearing in question, reducing costs and lead times. And since it requires less energy than manufacturing a new bearing, it is better for the environment as well.

The typical candidates for industrial bearing remanufacturing are:

- **large size bearings**
- **caster bearings**
- **backing bearings**
- **slewing bearings**

SKF offers industrial bearing remanufacturing of all major brands used in industries such as Metals, Mining, Mineral process and Cement, Renewable and Traditional Energy, Pulp and Paper, Food and Beverage and Marine.

Benefits

The SKF professional bearing remanufacturing services available worldwide can bring advantages and benefits like:

- **reduced total life cycle costs**
- **extended bearing service life**
- **reduced machine downtime**
- **reduced environmental impact**
- **maintained stock of replacement bearings**
- **improved overall asset reliability**

Depending on the amount of remanufacturing required, up to 90% less energy is needed to repair a bearing instead of manufacturing a new one. Furthermore, cost-benefit analysis shows that significant cost savings can be achieved by remanufacturing bearings – depending on bearing size, complexity, bearing condition and price.

In addition to reducing the energy use, SKF's remanufacturing services help protect the environment by responsible cleaning of used bearings and handling of waste.



How we remanufacture bearings

Our experienced bearing analysts evaluate your bearing and define which remanufacturing process will be the most efficient for restoring your bearing so that it is compatible with the application requirements. Through SKF's remanufacturing processes, relevant functional surfaces are repaired, including, if necessary, the

replacement of bearing components. As a consequence, the potential service life of the bearing can be fully exploited, as illustrated in **figure 1**.

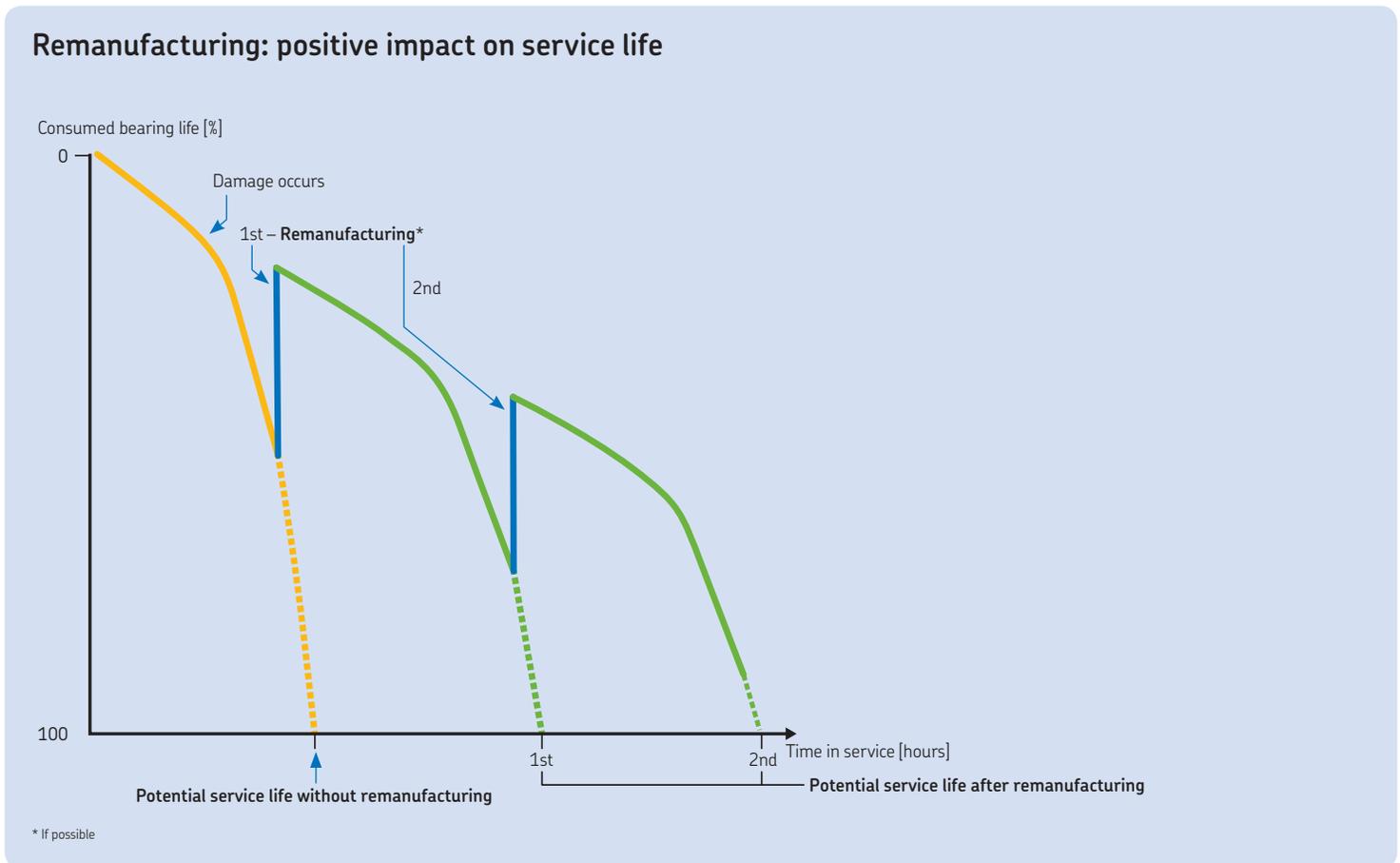


Figure 1



Bearing before remanufacturing



Bearing after remanufacturing

SKF is using its new bearings manufacturing standard, processes, equipment, quality assurance, knowledge and competences as the basis for its bearings remanufacturing service.

This includes acceptance criteria that deliver high quality results, even when extensive remanufacturing is needed.

To provide full traceability, SKF has developed and uses an advanced management system. By uniquely marking each asset during the remanufacturing process, you will be able to trace your bearing through its future life cycle.

In addition to standard remanufacturing, we can also remanufacture your bearings to a new or higher specification. This can include mounting sensors and the provision of other enhancements such as integrated lubrication, sealing solutions and rework to other specifications.

Overview of the bearing remanufacturing process:

- Registration in the management system
- Pre-cleaning and pre-inspection
- Disassembly and components washing
- Components inspection (non-destructive testing)
- Components measuring
- Reparability conclusion and report
- Quotation
- Components remanufacturing (e.g. sandblasting, vibro-finishing, polishing, grinding)
- Components replacement if necessary (e.g. oversized rollers)
- Components washing, inspection and measuring after remanufacturing
- Assembly and final traceability marking
- Final inspection and final measurements
- Cleaning and preservation
- Packaging and service reporting
- Documentation archiving

Timing

The correct timing for bearing removal and remanufacturing is essential to achieve the optimum balance of a long service life and low operating costs – as shown in **figure 2** below.

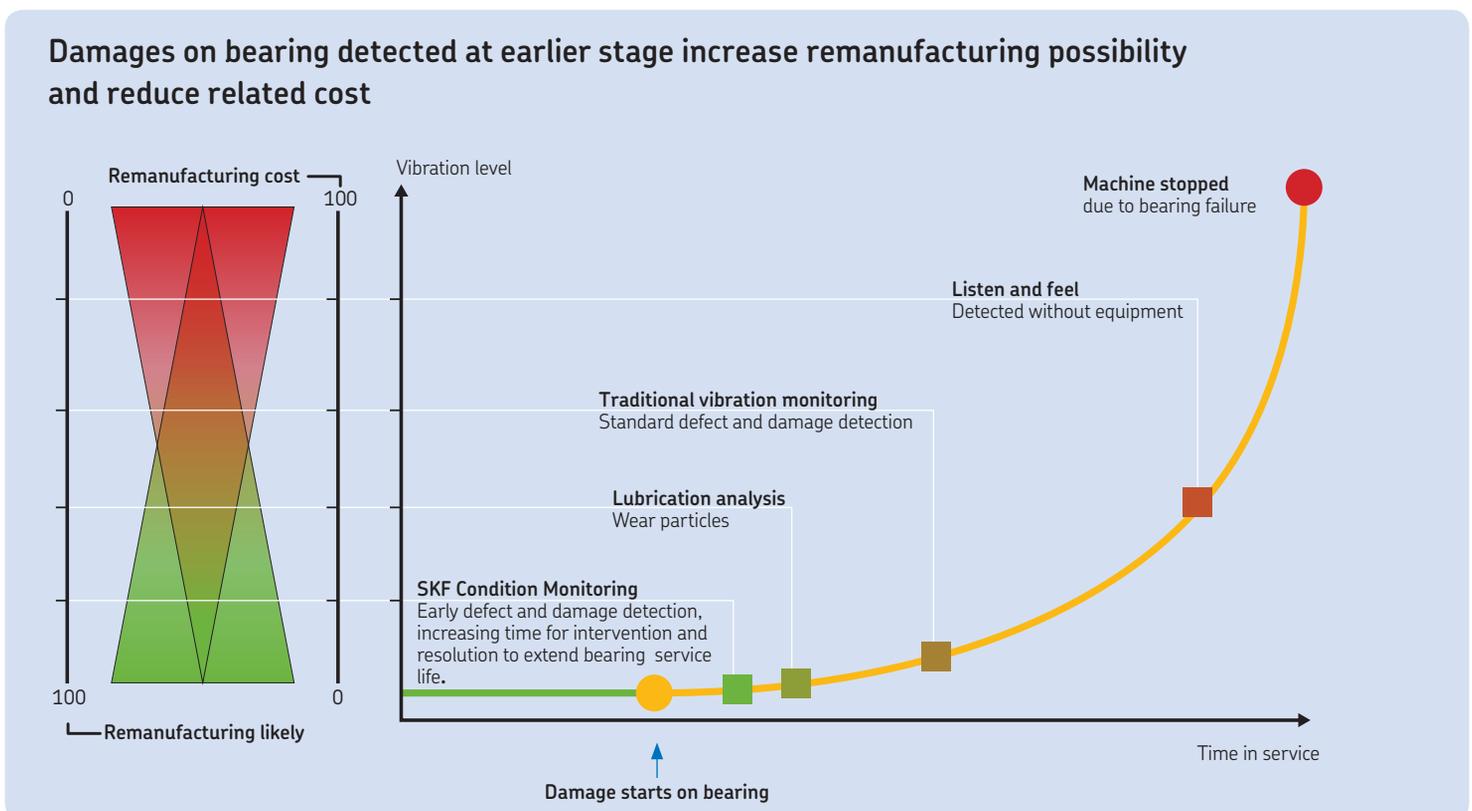


Figure 2

Prevent recurring damage

The full benefits of adopting the remanufacturing program can be achieved when you also utilize SKF's predictive maintenance expertise to ensure that you know the status of your plant machinery at all times.

In addition, SKF's root cause failure analysis (RCFA) service can deliver a set of causes and effects, plus a comprehensive plan of corrective actions to prevent the recurrence of damages.



Data collection with SKF Microlog

Our global network

SKF's bearing remanufacturing network is present in most parts of the world and is continuously expanding with new service centres.

All centres for remanufacturing have highly trained teams with special competencies.

Operating as a global network, we share knowledge, specific spare parts procurement, and capability development.

As a result, we can offer the agility and flexibility of a small company, but with the capacity, core competencies, and peace of mind achieved through working with an industry leader.

These and other services are a part of the SKF Solution Factory portfolio, a global network of facilities staffed by experts from every SKF discipline.

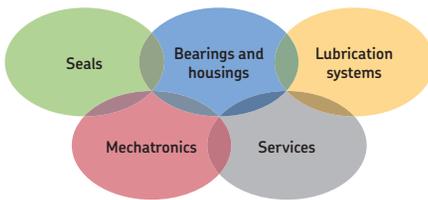
SKF Solution Factory brings people, services and technologies together to deliver custom solutions to industry challenges.

Your local SKF representative can connect you to a SKF Solution Factory near you.

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Combining products, people, and application-specific knowledge, SKF delivers innovative solutions to equipment manufacturers and production facilities in every major industry worldwide. Having expertise in multiple competence areas supports SKF Life Cycle Management, a proven approach to improving equipment reliability, optimizing operational and energy efficiency and reducing total cost of ownership.

These competence areas include bearings and units, seals, lubrication systems, mechatronics, and a wide range of services, from 3-D computer modelling to cloud-based condition monitoring and asset management services.

SKF's global footprint provides SKF customers with uniform quality standards and worldwide product availability. Our local presence provides direct access to the experience, knowledge and ingenuity of SKF people.

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