SKF fan upgrade services

One source for a full range of solutions, from unique bearing systems to circulating oil lubrication systems





Are productivity goals

To meet ambitious new productivity goals, many industries are pushing equipment to its operational limits – including fans and blowers. Higher rotational speeds mean higher operating temperatures. And that means more frequent fan bearing failures and costly downtime to repair this equipment, often very critical to production.

Sound familiar? If so, you're not alone. SKF receives at least one urgent phone call a day about heat-related issues in industrial fans.

The fact is, fans with conventional bearing systems and lubrication methods just were not designed to tolerate the excessive heat that accompanies higher fan speeds. Actually, they were never designed to be maintenance- or energy-efficient overall, so their operation has always been costlier than necessary, regardless of operating speeds or temperatures.

SKF – a single source "systems approach" to fan reliability

With expertise that spans bearings, seals, housings, lubrication and condition monitoring technologies, SKF is uniquely qualified to address virtually all of the areas that affect fan performance and reliability. SKF capabilities today include the industry's most complete range of solutions for increased fan reliability, including the most reliable circulating oil lubrication systems and technologies on the market.

With a goal of increasing fan performance while decreasing maintenance and downtime, SKF fan upgrade services address heat-related issues for industrial fans and blowers, whether grease or oil lubricated. After assessing the conditions and needs of a given facility, SKF makes upgrade recommendations. Ultimately, you decide on the specific fan upgrades you would like SKF to provide.

setting your fans up for failure?

Head off reliability issues with SKF fan upgrade services

Fan solutions vary with the needs and goals set by a facility's operators, but typically involve some combination of self-aligning bearings, advanced plummer (pillow) block housings, automatic lubrication systems, and maintenance and reliability services. In addition to the convenience of working with one supplier for a complete fan solution, customers can avoid the capital expense of replacing fans and blowers that are underperforming. Benefits include:

- Reduced vibration levels
- Lower operating temperatures
- Lower operating and maintenance costs
- Increased productivity
- Longer lubricant life
- Longer bearing and seal service life
- Increased reliability
- Lower power consumption

A step-by-step process to boost fan performance and cut operating costs

Assessment

All SKF fan upgrade services begin with a detailed initial assessment to determine the cause of fan damage and related maintenance issues.

Recommendations

SKF recommendations may involve a "total" fan shaft solution that incorporates all upgrade options, including an automatic lubrication system, or various combinations of component upgrades, lubrication systems and ongoing services.

Installation and ongoing support

SKF's knowledge engineers can perform or arrange for all bearing and shaft rework, alignment and installs, including automatic lubrication systems. SKF then supports the facility with a range of maintenance services, from basic condition monitoring to advanced maintenance reliability programmes.

SKF fan upgrade services can reduce hot gas and process fan downtime and boost performance for fans used in many industries and applications including cement, steel, glass, paper, food and agriculture.







Why SKF fan upgrade services?

We know rotating machinery in general, and industrial fans in particular

Along with 100 years of general rotating machinery expertise, SKF has decades of hands-on field experience with industrial fan maintenance and reliability. Responding to literally hundreds of fan-related inquiries each year from customers in the heavy-duty and process industries has made SKF application engineers experts in the causes of fan failure and how to prevent it.

SKF is the only single-source provider of complete fan bearing solutions, including circulating oil lubrication systems

Eighty percent of all mounted bearing failures are caused by contamination, lubrication, or mounting issues. As an expert in all of these areas, SKF is uniquely positioned to provide the world's most complete, interrelated fan bearing solution. Thanks to recent company acquisitions, this total fan bearing solution now includes the world's most advanced automatic circulating oil lubrication systems and technologies.





More resources, more solutions

SKF's expertise in the area of lubrication has expanded dramatically in recent years with the acquisition of two leading lubrication systems companies. As a result, SKF offers an incomparable range of solutions that includes automatic lubrication systems for heavy industry applications, machining tools and commercial vehicles.

A complete range of fan upgrade options and components



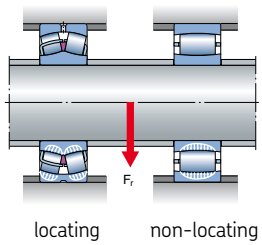
Advanced plummer block housings and seals

SKF SNL, SAF and SONL housings and seals are designed for use with SKF self-aligning bearings, and are suitable for the locating or non-locating positions. They maximize service life by combining stiffness, highly accurate machined surfaces and an ability to draw heat away from the bearing. They also allow simplified field installation and fully automated lubricant delivery.

Self-aligning bearings

SKF offers an innovative bearing system. It consists of two self-aligning bearings, a CARB toroidal roller bearing in the non-locating position and a spherical roller bearing in the locating position. The system accommodates thermal expansion of the fan shaft within the CARB bearing, virtually without friction. This system runs with lower friction, temperature and vibration levels, reduces power consumption and enables higher fan speeds.







Maintenance and reliability services

However extensive the upgrade, SKF has the tools and services to maintain it more reliably. From basic condition monitoring to Predictive Maintenance and Operator Driven Reliability, SKF can implement and conduct ongoing reliability programmes, or equip and train maintenance teams to do so independently.

SKF lubrication solutions

Improper lubrication causes 36% of premature bearing failures

To help your fan bearings beat these odds, SKF lubrication products are designed to deliver the right amount of grease, to the right bearing, at the right time. From standard, off-the-shelf kits and lubricants to custom lubrication systems, SKF lubrication solutions boost bearing service life and reliability while cutting power consumption, maintenance and operating costs. The resulting reliability improvements will help boost long-term plant productivity.

SKF lubricants

SKF offers a complete range of greases to match all bearing types and sizes, as well as application temperatures, speeds and loads. As part of our fan upgrade solution, we can help you select the right SKF lubricant for your fan application. Our online lubrication selection guide – LubeSelect – is also available at www.skf.com.



Centralized grease lubrication systems

Virtually maintenance-free, SKF centralized lubrication systems supply lubricant from a central source to individual fan bearing points. Every bearing receives the right lubricant in the right amount to minimize wear and promote longer service life.

The result? Excessive lubrication problems vanish, bearing wear and tear is reduced with minimal maintenance, and lubricant consumption falls – in some cases by as much as 50% compared with inexact manual methods. SKF centralized lubrication system solutions are available for single-line lubrication, dual-line lubrication and progressive lubrication systems.



Circulating oil lubrication systems

From specialized lubricants to advanced circulating oil lubrication systems, SKF has a solution for every lubrication demand.

As part of a total fan solution upgrade, SKF can include automated grease lubrication or one of a wide range of standard circulating oil lubrication kits designed to work with a given bearing or bearing housing arrangement. These units, which are ideal for industrial fan applications where grease or oil bath lubrication is not adequate for the operating temperature or speed, deliver a constant flow of filtered and temperature-controlled oil to the bearings. The pumping system and tank size are designed to match the selected bearing and housing system, and allow time for oil de-air before it is filtered and supplied to the bearing.

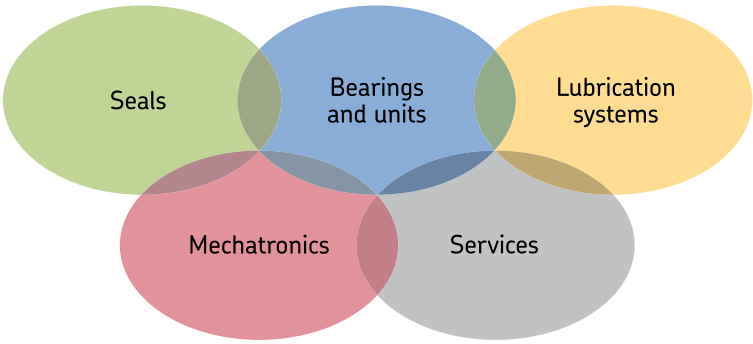
SKF can also provide special safety-critical units with two pumps as well as basic units with controls for monitoring. In addition to standard systems, SKF can custom design lubrication solutions for industrial fans as well as for complete plants.

Whether the SKF fan solution is off-the-shelf or customized, the resulting lower bearing temperatures improve service life and reliability, as well as decrease power consumption and maintenance and operating costs. Improved reliability will boost long term plant productivity.



An SKF oil circulation system can reduce bearing operating temperatures by as much as 50 °C (122 °F).

For more information, or to set up a meeting with an SKF application engineer, contact your local SKF sales office.



The Power of Knowledge Engineering

Drawing on five areas of competence and application-specific expertise amassed over 100 years, SKF brings innovative solutions to OEMs and production facilities in every major industry worldwide.

These five competence areas include bearings and units, seals, lubrication systems, mechatronics (combining mechanical and electronics into intelligent systems), and a wide range of services, from 3-D computer modelling to advanced condition monitoring and reliability and asset management services.

A global presence assures SKF customers uniform quality standards and universal product availability.

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