

INSIGHT

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HOW TO LUBRICATE INACCESSIBLE CHAIN

RotaLube[®]
SYSTEMS LIMITED



In chain driven applications, it can be difficult and dangerous trying to ensure that the chain stays lubricated and continues running smoothly, especially while machinery is operating behind chain guards.

Here, Power Transmission Product Manager, Paul Speight demonstrates how to use the RotaLube inaccessible chain lubrication kit, while explaining some of the features and benefits of the kit for users.

"Maintenance is quite a big thing, so when you have to stop the machine to relubricate your chain, we might have a solution.

We offer from stock, a RotaLube[®] Inaccessible Lubrication Kit - it's quite simple to use, after the initial set-up with the bracket, applying the lubrication is as simple as attaching your aerosol to the connection outside of the chain guard.

So, the benefits of this RotaLube system are: no downtime, worker safety, no contamination and increased production. If you need anymore information, please get in touch with us and we can discuss what RotaLube can do for you."

Watch the full video on YouTube @ Acorn Industrial Services Ltd.

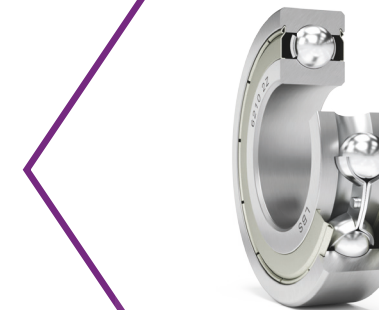


Connect with Power
Transmission Product Manager,
Paul Speight on LinkedIn

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LBS[®]



ACORN NOW STOCKING LBS BEARINGS

ACORN is proud to introduce a new range of bearings to its stock holding. As authorised distributors of the LBS range of bearings, we can stock large quantities, all of which are ready for immediate despatch.

LBS Ball Bearings are excellent for a multitude of industries and applications, from electric motors and generators to fans, pumps, transmissions, and transport, making it the optimal choice if you are looking for affordable quality. LBS bearings are rigorously tested and inspected for durability and performance, while being fully audited in compliance with exacting industry standards. You can trust LBS to deliver on value and performance.

LBS is an affordable, high-quality bearing brand that offers unbeatable value for money. Manufactured to ISO standard, the LBS pop-met series is an excellent choice if you're looking to reduce costs without compromising on quality.



Sealed



Sealed Stainless Steel



Open



Shielded

When you're specifying a component for your machinery, such as a new motor or belt, it can be tempting to make your decision based on purchase price alone. However, what you don't see at this moment in time is how much that choice will cost you over the lifespan of your machinery.

You need to know exactly what that part is going to cost you in maintenance, labour and downtime. That's where Total Cost of Ownership (TCO) comes in, helping you to understand exactly how much a product will cost your business throughout its lifespan.

1. Understand the true cost of your business operations

When you think about the costs of running your production line, you probably think about the cost of a part, maintenance costs and the energy bills as separate entities which are unconnected. However, your choice of components can have a direct impact on the cost of maintenance, associated downtime and energy consumption.

Taking a TCO approach means looking at how these costs interweave and the relationship between them. By calculating Total Cost of Ownership, you'll be able to understand the true cost implications of each and every choice of component.

2. Put the focus onto quality

It can be tempting to simply opt for the cheapest component, under the perception that you're saving money for your business. However, if that component has a short lifespan, not only will you incur regular replacement costs, but also the associated costs of downtime, maintenance and labour. By understanding the Total Cost of Ownership, the focus begins to shift to quality, longevity and efficiency, as opposed to solely focussing on the price tag.

3. Reduce your downtime

Downtime isn't just an inconvenience for a business – it can be expensive too. When production grinds to a halt, profit margins begin to decrease and labour is often wasted. Putting the focus onto Total Cost of Ownership can enable you to identify where downtime is being created and opt for components which extend maintenance intervals and reduce the risk of breakdown, keeping downtime to an absolute minimum.

4. See the bigger picture

It can be hard to see past the price tag of a component such as a motor or bearing. But what if we told you that the purchase

price of a motor represents just 1% of the Total Cost of Ownership of the motor? You can add on another 2% for maintenance, but the remaining 97% of the TCO of a motor is found within the electrical energy usage.

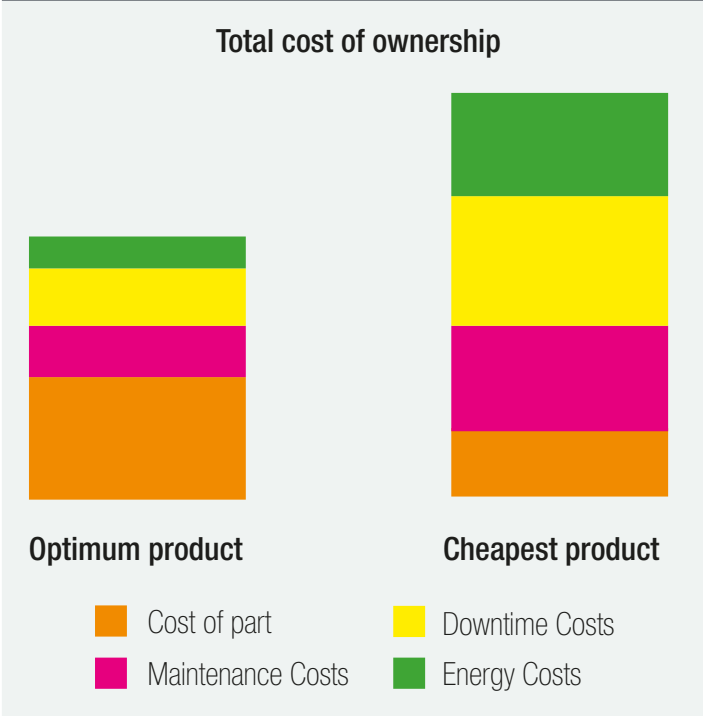
By switching to a Total Cost of Ownership approach, you can begin to see the bigger picture. It's not just down to the purchase price of a component, but all of the other costs that will be incurred as a result of the choices that you make during the specification process. This can include breakdowns, energy consumption, maintenance, replacement and downtime.

5. Make informed decisions

Taking a Total Cost of Ownership approach for your business doesn't necessarily mean that you'll be choosing the most expensive components. What it does mean is that you'll be able to make educated and informed decisions about the best way forward



5 reasons to adopt a total cost of ownership approach



when it comes to component selection, based on what's right for your business. After all, you can't make an informed decision without knowing all of the facts.

What Total Cost of Ownership does tell you is exactly how much your component selection will cost through the entirety of its service life, helping you to fully understand the implications of your selections.

Turn your focus to Total Cost of Ownership

It can be easy to focus on the short term when you're specifying components for your machinery, looking at the price tags and making decisions based on the perceived cost savings that you're making. But what if we told you that opting for lower priced components won't always save you money?

By switching your focus onto Total Cost of Ownership, you can begin to understand the implications of every choice that you make when it comes to specifying parts for your applications. Whether it's energy usage, maintenance costs, downtime or production rates, calculating the Total Cost of Ownership can help you to understand exactly how much each component will cost your business throughout its lifespan.



TALK TO THE EXPERTS

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ELECTRIC MOTOR PROBLEMS AND SOLUTIONS

Often the driving component of an application, electric motors play a central role in machinery in every industry. A failure in this critical piece of machinery could be catastrophic to the business, with the potential for high costs and a long period of downtime.

Understanding the common problems that can occur with electric motors can allow you to put measures in place to avoid failure and give your electric motor the best possible chance of achieving its maximum possible service life.

1. Low resistance

Low resistance is the most common cause of failure in electric motors. It is also often the most difficult to overcome. Under conditions such as overheating, corrosion or physical damage, degradation of the insulation of the internal windings of the motor may occur. This then causes insufficient isolation between the motor windings or conductors, leading to short circuits, leakages and eventually motor failure.

Regularly inspect the insulation of the windings for signs of wear and replace before low resistance leads to failure. If you are unsure, consult an expert.

2. Overheating

Overheating is generally caused by either a high temperature in the operating environment or poor power quality. It is responsible for around 55% of insulating failures in electric motors. For every 10 degrees Celsius that the temperature of a motor rises, the insulation life is reduced by half.

To avoid overheating, ensure that electric motors are kept as cool as possible. This can be done by maintaining as cool an

Low
Resistance



Overheating



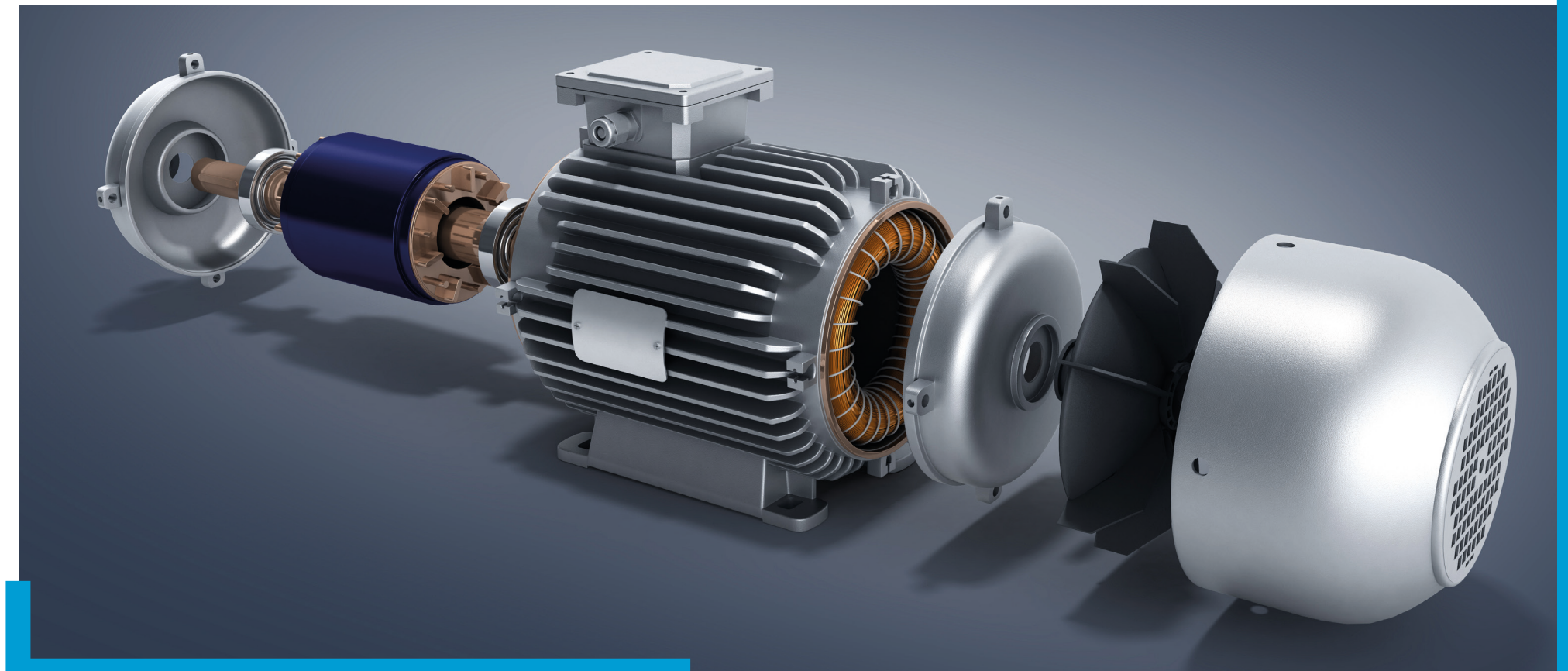
Electrical
Overload



Vibration



Contamination



operating environment as possible and regularly checking the temperature of the motor.

3. Electrical overload

Electrical overload is also commonly referred to as overcurrent. It is caused by an excessive flow of current within the windings of the motor, which exceeds the design current that the motor is able to carry efficiently and safely.

Overcurrent is often the result of a low supply voltage, which results in the motor drawing in more current in an attempt to maintain torque. Electrical overload can also be caused by short-circuited conductors, or an excessive voltage supply.

It is important to install effective overcurrent protection which is able to detect overcurrent and interrupt supply to protect the motor.

4. Vibration

Vibration can be extremely damaging to electric motors, frequently causing premature failure. It is often caused by the motor being positioned on an uneven or unstable surface. However, vibration can also be a result of an underlying issue with the motor, such as misalignment or corrosion. Electric motors should be regularly inspected for vibration using a motor analysing tool.

Ensure that electric motors are positioned on a flat and stable surface. If vibration still occurs, check for signs of wear, as well as misalignment or loose bearings. Consider contacting a specialist if the source of vibration cannot be easily identified.

5. Contamination

Electric motors frequently operate in

environments where dust, dirt and chemicals are present, which may find their way inside the motor, leading to contamination and motor failure. These contaminants can dent bearing raceways and balls, leading to high levels of vibration and wear. They may also block the cooling fan, limiting the motor's ability to regulate its temperature and increasing the chances of overheating.

As contamination is one of the leading causes of failure in electric motors, it is essential to prevent it from entering the motor. Luckily, this is relatively easy.

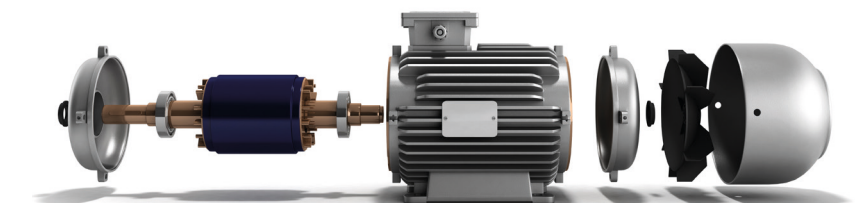
Ensure that work areas, tools and fixtures are kept as clean as possible at all times to help eliminate the chances of contamination entering the motor. When laying out the workspace, try to position motors away from applications such as grinding machines which product large quantities of harmful contamination.

Electric motors are the driving component of a vast range of applications across every industry, and regular inspection is essential to reduce the risk of premature failure. If you are in doubt about the condition of your motor, it is always advised to contact a specialist for further investigation.

Contact our knowledgeable couplings and drive division to discover how they could help you to improve the efficiency and reliability of your electric motor.



**Connect with Couplings
& Drives Business
Development Manager,
Tom Fowler on LinkedIn**



TOP 5 MAINTENANCE PRODUCTS TO SAVE YOU TIME & MONEY

Over 50% of all premature bearing failures are attributed to poor maintenance. Keeping up with regular maintenance is the best way to keep your machinery running at its optimum level for the longest time possible.



**ACORN ARE AUTHORISED
DISTRIBUTORS FOR SKF
PRODUCTS**

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www.acorn-ind.co.uk/skf

1

SKF LAGD 125 *automatic lubricator*

- Ready to use out-the-box
- Pre-loaded with high performance grease.
- Reduces maintenance time by lubricating components without needing intervention.
- Increases worker safety by reducing maintenance needed in hard-to-reach areas.
- Allows flexibility as users can set dispense rate between 1 and 12 months.
- Wide range of greases available.



2

SKF TWIM 15 *bearing heater*

- Light weight, portable heater that's easy to store.
- Capable of heating bearings, couplings and gears weighing up to 20kg.
- No noise, the TWIM 15 heats components silently.
- Safer option as components are heated without the induction plate getting hot.



3

SKF TKSA 41 & 51 *shaft alignment tools*

- Easy-to-use, not special training required.
- Identifies and corrects shaft misalignment.
- Can be used on both horizontal and vertical shafts of up to 10 metres in length.
- Hands-free measurement due to automatic measurement feature.



4

SKF TMFT 36 *bearing fitting tools*

- Facilitates mounting of bearings with bore diameters from 10-55mm.
- Reduce risk of damage to bearings raceways and rolling elements.
- Can be used to mount bearings, seals, pulleys and bushings.
- Kit includes: 36 impact rings, 3 impact sleeves and dead blow hammer.



5

SKF TMHC 110E *hydraulic puller set*

- Combines both a jaw puller and strong back puller with up to 100kN pulling power.
- Flexible option for varying space demands of applications.
- Can be assembled as 2 or 3 arm puller
- Extension rods can increase pulling lengths up to 245mm.





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