



“Overall, 70 per cent of bearing failure is due to inappropriate and wrong grease selection.”

Pulkit Khemka,
Vice President, Pensol Industries Ltd

Photo courtesy: Pensol Industries Ltd



Lubrication plays a vital role in extending the life of bearings.

tomobile, power, or industrial machinery, the concept of lightweighting is fast gaining momentum as it leads to fuel saving, resulting in overall economy. In today's world where the customer's demands are ever increasing in terms of performance and value, companies have to come up with new technologies which have to be greener while providing an increased price-to-performance factor. With this view, most of the CE manufacturers are looking at lightweighting their equipment while increasing its efficiency. Bearings play a major role in lightweighting. Says Shenoy, “Our Ultage range of products has higher load ratings and this can contribute in downsizing the bearings at the time of design. Hence we are helping the industry in their objective of lightweight concept. This range is available in spherical roller and taper roller bearings. We are also expanding the range into cylindrical and ball bearings too.”

NRB has also engineered cost-effective, lightweight friction solutions for a host of applications that resulted in increased fuel efficiency, noise reduction for engines and transmissions, and enhanced life. Zaveri gives the highlights, “We employ the frugal innovation approach wherein we devise smart solutions using sustainable design that preserves resources. The concept

currently is applied to drawn cup cylindrical roller bearings and has replaced solid race bearing products not only like CRBs but also ball bearings.”

Says Doshi, “We at MRS are working on designs that will provide customers with weight reduction through use of recyclable materials (e.g., replacing casting parts with engineering plastics) which will sustain the same load capacities while reducing the weight of the components which in turn saves on energy consumption and logistics costs, and which indirectly also contributes to the carbon footprint of the product.”

For prolonged service of equipment

Bearings are the first component to fail during operation in any construction equipment, and hence are of critical importance. Bearings facilitate effective functioning of the equipment and the

right bearing type will increase the efficiency of the equipment. According to Kulkarni, there are various parameters within the bearing that govern its quality and functionality. These include the type of steel, the seals used to keep the contaminants out and the grease which ensures proper lubrication. He adds, “SKF bearings are specially designed and manufactured considering all these parameters as per the application need. Using the right bearing type will ensure long life, which in turn will ensure increased efficiency and service life of the corresponding equipment.”

Says Shenoy, “Bearings are a key component in any machinery. They limit the relative motion and reduce friction between the moving parts. Hence it is important to fit and maintain them properly. Well-maintained bearings can work for a long time and thus extend the service life of any machinery. In addition to this, our Ultage range further helps to prolong the service life of the equipment.”

According to Doshi, bearings are an integral part of the science of Tribology, which studies interaction between two moving parts. “CEs require high efficiency not only in terms of operations, but also to operate without breakdown or need for service for a longer time. The selection of the right type (design) and capacity of bearings provides the equipment the needed efficiency to operate with long service intervals,” he adds.

Bearing lubrication

Lubrication plays a vital role in extending the life of bearings. Proper and timely lubrication reduces the problems associated with bearings. Greases are mostly used to lubricate the bearings. Grease has to be applied to avoid the



“We specialise in customised friction solutions to meet the exacting needs of our customers.”

Harshbeena Zaveri,
Vice Chairman & Managing Director, NRB Bearings