



**Barloworld
Equipment**

CAT

BEARINGS DESIGNED TO TAKE THE LOAD *Condition monitoring makes the difference*

Hidden from view, but of vital importance, every Cat mechanical drive system incorporates a range of purpose-designed bearings that perform very specific roles, aiding in the transfer of the varying speed, torque, and thrust force that passes through the drive train.

“Every Cat bearing is precisely matched to the kind of load it’s designed to carry,” explains Barloworld Equipment group product specialist, Reuben Phasha, “and plays a critical role in safe and reliable equipment operation. For this reason, condition monitoring via regular oil sampling should be top of your list since left undetected, a bearing failure will cause metal particles to enter your machine’s lubrication system, wearing gear teeth and ultimately damaging the components.”

Caterpillar offers two fundamental types of bearings, namely antifriction and plain (bushing).

Antifriction bearings (ball, roller or needle-type) all have similar components: hardened steel rings called races, and optional separators or cages (which provide spacing for the rolling elements between the races). In some applications, the rolling elements are in direct contact with the shaft or other mounting.

Within this operating mix, lubrication is an important factor in bearing maintenance.

“Lubrication supplies an oil film for balls and rollers, reducing friction between bearing components and minimising heat built-up whilst providing a protective coating to prevent rust,” Phasha continues.

“Furthermore, using the appropriate quality, type and viscosity of lubricant is vital to good bearing performance and life. Interestingly, over-lubricating is equally harmful and can lead to churning, generating friction and heat, which eventually initiates premature failure.”

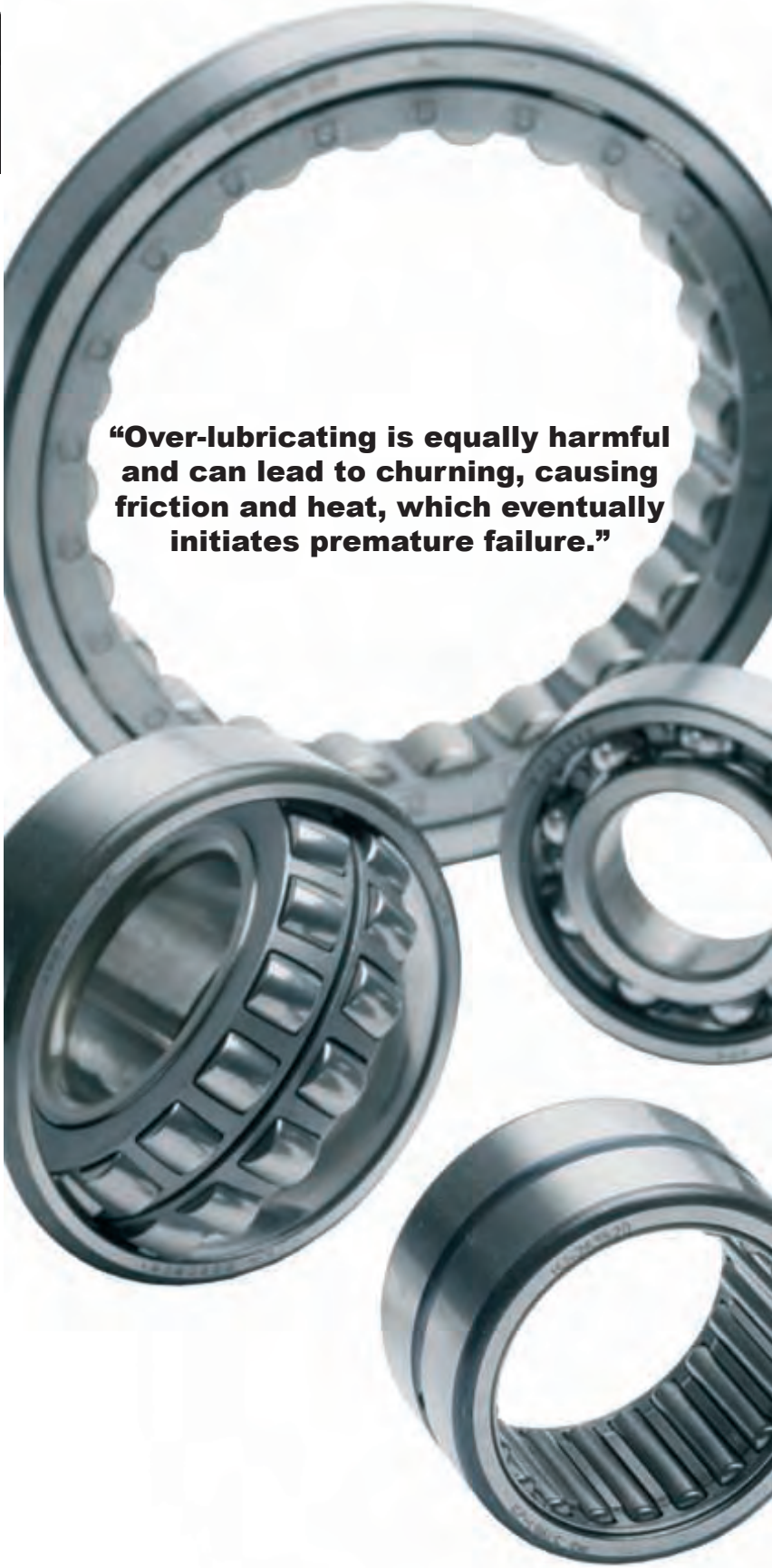
SPLASH LUBRICATION

In splash lubrication systems, such as in final drives, it’s imperative to retain the right type and quantity of lubricant in the housing and to change the lubricant and filters at recommended intervals. Using lubricant rated for the proper temperature must also be noted. For example, when operating at extreme temperatures, an incorrectly specified lubricant can result in oxidization and the breaking down of oil additives.

“Regardless of the type of lubrication system you’re using, be sure to understand and follow the manufacturer’s recommendations to establish the right type and frequency of lubrication that’s needed for your specific bearing design and application,” stresses Phasha.

“Additionally, introduce a scheduled oil analysis regime for your machines (if one isn’t already in place). Cat’s S.O.S Oil Analysis programme is the best way to identify abnormal wear before it becomes a major problem.”

For more information about Caterpillar’s extensive range of lubricants and our S.O.S. Oil Analysis programme contact your Barloworld Equipment Customer Service Representative at a branch near you.



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For further information contact:

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