

Industrial Gear Oil Additive

Bardahl Industrial Gear Oil Additive is a concentrated gear oil additive used in industrial gearboxes. **Bardahl Gear Oil Additive** reduces friction and wears, lowering the unit's temperature. This results in the more efficient functioning of the gearbox or gearbox and a significant reduction in maintenance and repair costs, and, last but not least, saving on the required energy.

The problem

Industrial gearboxes are often heavily loaded at very high speeds. As a result, the increasingly hot oil will form foam. This heat and foam reduce the lubricating power of the gear oil. This reduction in lubricating power automatically leads to increased friction and therefore wear. Wear and metal fatigue reduce gear life and increase energy consumption. In addition, the resulting gum and varnish layers will adversely affect the proper functioning of the gear transmission.

How it works

Bardahl Gear Oil Additive prevents these types of problems. A unique anti-foam addition prevents foaming and ensures that the oil lubricates well even at high speeds. Bardahl's polar attraction formula ensures that old deposits are removed and a lubricating film forms, which can tolerate pressures and temperatures much higher than ordinary gearbox oils. Many gear transmissions are so heavily and impactfully loaded that the teeth will show much wear without special oils. Gearboxes of wire drawing machines, rolling mills, excavators, cranes, stone crushers, etc., need an oil that must tolerate very high pressures, so-called 'extreme-pressure' oils.

There is a group of gear reductions where the wear is critical because the contact between the interlocking tooth profiles and the load is similar to hypoid transmission. **Bardahl Industrial Gear Oil** is ideally suited for these gearboxes and gearheads.

Worm gear reductions form a separate group under the gear transmissions. The lubrication of the surfaces between the teeth of the wheel and the worm is one of the biggest problems. There is a distinction between transmissions with an overlying and a child worm. It is mainly the transmissions with an underlying worm that require a relatively thin oil to prevent the strong heat development due to the churning of the oil. In addition to the correct viscosity, good oxidation stability also plays an important role here. An oil with higher viscosity can usually be chosen for gearheads with an overlying worm. **Bardahl Industrial Gear Oil Additive** ensures good oxidation stability and excellent high-pressure properties.

In **hypoid transmission**, a sliding speed occurs both in the width and longitudinal direction between the teeth of pinion and crown wheels. As a result, the oil film can be broken entirely locally, and an intense heat development occurs.

The hefty load in this type of gear caused a metallic contact between the tooth flanks. The high temperature and pressure ensure that the tooth flanks weld together locally and are torn loose again. Severe damage to the gears is the result. This product's high concentration of Bardahl ingredients prevents the lubricating film from breaking through. This is in contrast to standard gear oils, which use EP dopes for this purpose, which are based on phosphorus and sulfur compounds, with the significant disadvantage of causing "pitting" on the metal surface.

Advantages

- Limit lubrication properties at a high load.
- Good oxidation stability, so that the oil does not thicken or does not form sludge
- Prevents corrosion
- Due to the optimal lubrication, considerable energy or fuel saving.
- Due to the high-pressure properties of the Bardahl components, less friction and wear

Applications

Bardahl Industrial Gear Oil Additive is used as an additive (5-20%) to the various gear oils, except vegetable oils. The percentage to be applied depends on the conditions of use.

LAB REPORT

- TEST

British Timken has developed a generally accepted method to investigate this type of oil for its usefulness. The test equipment measures the wear difference between a less-good lubricating oil and a better one. The not-so-good lubricating oil will reach its wear limit during the test at a low load and the better oil at a higher gear.

Below is a product comparison between a well-known 80W90 GL6 (heaviest class) Gear Oil and the same oil, plus Bardahl Industrial Gear Oil Additive. The result of this test is that the product still lubricates with Bardahl at a higher load and the one without Bardahl, on the other hand, no longer.

- Result

The use of **Bardahl Industrial Gear Oil Additive** indicates that the friction turn moment is 35% lower, and the wear is on average 21%. The load could be increased during the test of op.220 kg280 kg.

N.B.

Bardahl also has a complete gearbox and gearbox oil, in which the above product is already processed. As an industrial gearbox oil with various viscosities under the name: **Bardahl Industrial Gear Oil K21 series**

Article number 70155
Contents 5 liter

Article number 70182
Contents 25 liter

Article number 70186
Contents 60 liter