



Air Vision,

Fan's bearing lubrication.

Statistics performed by manufacturers are showing that early malfunctions are essentially due to the following reasons:

- Inappropriate mounting: 16%
- Incorrect lubrication: 36%
- Pollution: bearing ways contamination: 14%
- Fatigue: overload – incorrect or insufficient maintenance: 34%

The bearings installed on the industrial fans are operating often at high speed and with average low radial loads.

Despite the wrong idea that the main goal of the bearing lubrication is to restrain the frictions, they are first used to create at the pieces surface very strong adhesive film, forbidding any possible metal/metal contact to avoid galling.



An excess of lubrication is generally creating an increase of frictions and therefor a heating that might be injurious for the component length-life. We use mainly grease and oil eventually loaded with solid lubricant as for example graphite or Molybdenum disulfide.

Grease lubrication:

The grease is chosen as lubricant for bearing in the case of normal speed and temperature operation. The grease own several advantages in regards with oil: it allows a non-sophisticated installation, therefor less expensive, with a better adherence and ensure a protection against humidity and impurities.

Oil lubrication:

Oil is the most appropriate lubricant when the speed and/or operating conditions are not allowing the use of grease or when the heat should be removed from the bearing.

The grease is the most easy use lubricant and do not requires complex sealing systems. For that reason, this is the lubricant type the most used for bearings.





The grease composition is made of thickening, metallic soap or other, a mineral base or synthetic oil and additives. The grease properties are mainly depending on mineral base oil. In general, the grease with a weak viscosity oil base are dedicated to the low speed and temperature applications, while the high viscosity is used for heavy load applications.



The oil base is bound to thickenings called “soap” in order to get the grease characteristic pasty consistency. The most used thickenings are metallic soaps with lithium, sodium and calcium.

Some grease characteristics as for example the allowable temperature rank, the mechanical stability, the waterproof capacity, etc. are directly depending on the soap type. The greases are divided into several classes of consistency defined by the NLGI (National Lubrication Grease Institute). The NLGI grade gives the grease consistency increasing with the viscosity level.

For bearings, we use often the grades 1, 2, 3.

The greases mix of several types generates a modification of the original consistency. Usually, the consistency decrease, the operation temperature rank falls and the other properties are also changed. The greases with oil base or thickenings of different types or different brands manufacturers should not be mixed.

Do not hesitate to question your bearing manufacturer or your lubricant supplier to get a qualified technical assistance choosing the appropriate lubricant in order to minimize malfunctions, breakdowns and production losses.