Facts about...

Lubricants

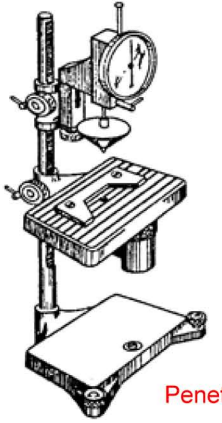
Single line system - oil and fluid grease up to NLGI cl. 00

Multi line system - oil, fluid grease and grease up to NLGI cl. 2

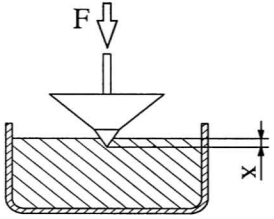
Progressive system - oil, fluid grease and grease up to NLGI cl. 2

Consistency classes

NLGI classes acc. to DIN 51818	Worked penetration acc. to DIN 51804 sheet 1 (0,1)	Description
000	445/475	flowing
00	400/430	flowing
0	355/385	flowing
1	310/340	very soft
2	265/295	soft (Multi purpose grease)
3	220/250	still soft
4	175/205	medium solid
5	130/160	solid
6	85/115	very solid



Penetrometer



Protective Collar

For many constructions with sliding bearings, the formation of a grease collar is intended to protect the bearing against environmental impacts.

Only multi purpose grease creates this protective grease collar. Fluid grease simply runs out of the bearing.

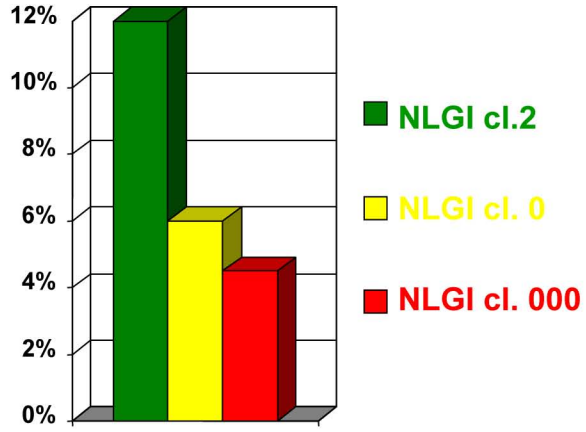
This feature is especially important for the use at construction machines or trucks in dirty surroundings.

Adhesiveness

Grease consists of

- a basic oil
- a thickener

With rising soap content also rises the consistency and adhesiveness of a grease.



Water Resistance

The water resistance of a grease is determined by:

- the soap and thickener content
- the viscosity of the basic oil
- ahe additives
- the temperature of the water

The water resistance of grease rises with the soap content.

Commercial vehicles often have contact with splashing water.
For this reason, multi purpose grease is ideal for mobile applications.

Vibrations

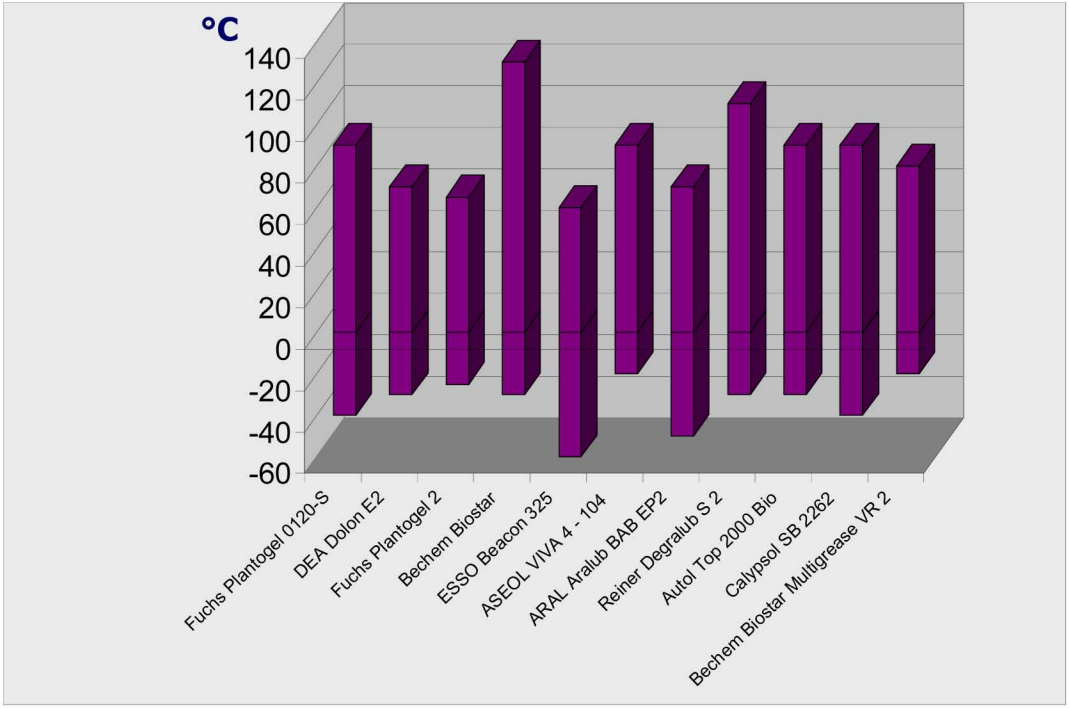
Sometimes, a grease package leaves the lub point under the influence of vibrations.

In most cases the *adhesion* between bearing and grease is too low. The *cohesion* within the grease is sufficient.

If the vibration stability of a grease is not sufficient, the use of a grease with higher consistency is recommended.

Because of the higher stability, the use of multi purpose grease (NLGI cl. 2) is always an advantage.

Bio Lubricants



Lubrication of Sliding Bearings

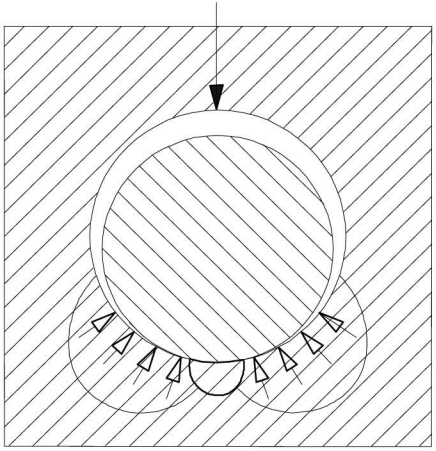
The lubrication of moved parts with only one direction of rotation is the most simple one.

If the correct lubricant has been chosen, the user only has to take care, that there is enough grease in the bearing.

With an alternating direction of rotation and only little relative movings situation changes.

Under these circumstances it might occur, that there are areas without lubricating film. In these cases the use of grease with high pressure additives (EP = extreme pressure) is recommended.

Most of the common multi purpose greases contain EP-additives.



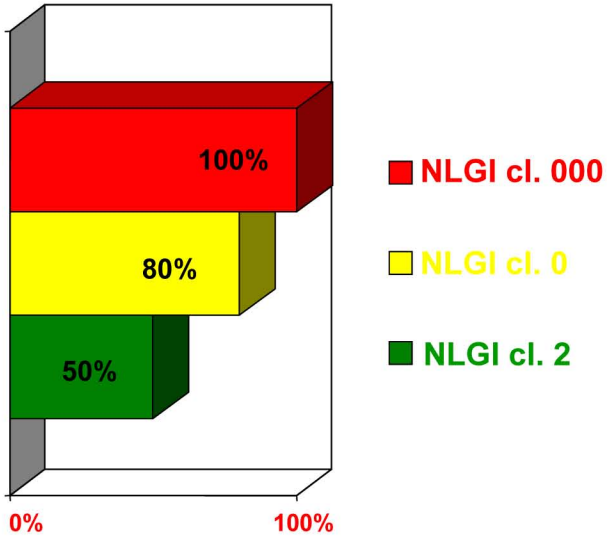
Lubricant Consumption

With sinking consistency of a lubricant also sinks the adhesivity. This means higher consumption.

The given values are based on experiences with central lubrication.

The effective consumption of the lubricating *oil* is very low. The grease transports the lubricant only with good adhesive characteristics to the friction point.

A high penetration class (NLGI cl. 2) saves lubricant and is environment-friendly.

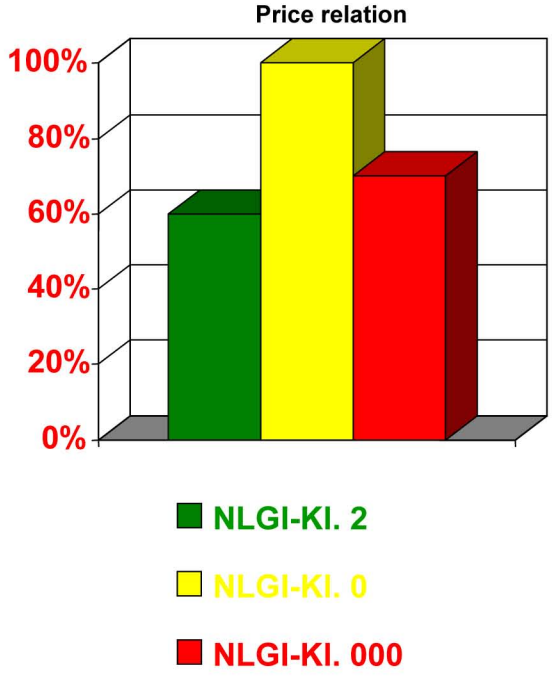


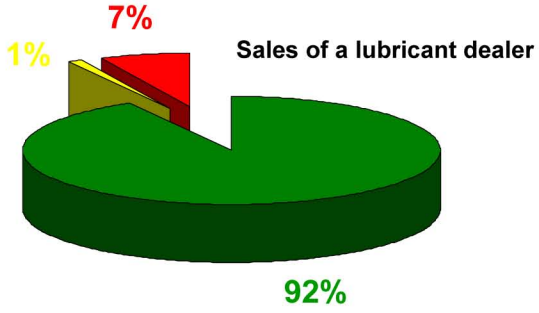
Lubricant Prices

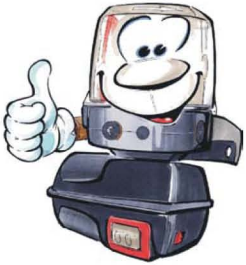
The lubricant price depends on quality and quantity.

The higher the production, the lower the costs.

Multi purpose grease is the most widespread lubricant world-wide.





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