SILVERLINE BEARING INSTALLATION

Fitting a SILVERLINE bearing

It is common practice, both in the marine and pump industries, to cool bearings during fitting. In order to minimise the risk of permanent damage to a SILVERLINE bearing during this process, it is important that the bearing is not cooled below the temperature given within this datasheet.

SILVERELINE bearings at Low Temperatures

As the temperature of a SILVERLINE bearing is lowered the rubber lining of the bearing gradually stiffens, as shown in Figure 1. If we take a SILVERLINE bearing the stiffness of the rubber lining at a temperature of -40^{0}C is approximately twice that when at a temperature of +20^{0}C. Cooling below a temperature of -40 ^{0}C gives rise to rapid stiffening of the rubber lining until at a temperature of -60^{0}C the rubber becomes glass-like and brittle. The temperature at which the rubber lining becomes glass-like is known as the Glass Transition Temperature (T_9)

Glass Transition temperatures (T_9) for Rubber Lined SILVERLINE Bearings.

There are many rubber compound formulations that have been developed for lining SILVERLINE bearings. The (T_9) temperatures for the four most commonly used rubber linings are given below.

Compound	Polymer	Application	(T_9) ^{0}C
25-520	Nitrile	Standard bearings	-35.0
26-430	Nitrile	Dry run capability	-38.5
02-955	HNBR	High Temperature	-35.4
01-147	Viton	High Temperature & chemical resistant	-22.5

Recommended minimum cooling temperatures for SILVERLINE Bearings. It is recommended that SILVERLINE Bearings are not cooled below their (T_9) temperature +15^{0}C as detailed below.

Compound	Polymer	Application	(T_9) ^{0}C
25-520	Nitrile	Standard bearings	-20.0
26-430	Nitrile	Dry run capability	-23.0
02-955	HNBR	High Temperature	-20.0
01-147	Viton	High Temperature & chemical resistant	-7.0

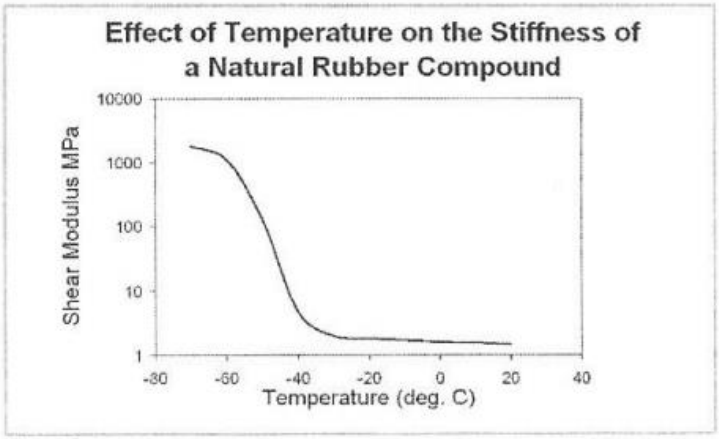

Figure1