

HMS INDUSTRIES

BEARING LUBRICATION

Lubrication is one of the primary factors governing the service life of rolling contact bearings. Theoretically, it might be assumed that where only pure rolling contact is involved, no lubrication is needed. However, in a ball or roller bearing there is a certain degree of sliding or skewing in addition to the rolling action due to the different peripheral velocities at various points in the curved surfaces of the contact areas. Sliding also occurs between the various component parts of the bearing.

The limiting speed of a bearing depends to a great extent on the ability of the lubricant to reduce and carry away the heat generated in the sliding contact areas.

Prevention of corrosion is of major importance in all applications. Such protection must be provided in storage and after mounting in the application.

Types of Bearing Lubrication

Two types of bearing lubrication are normally used:

- Oil** Suitable for operation at extremely high speeds. Easy to check for performance and reliability. Easy to feed to the rolling and sliding contact areas. Suitable for extremely high temperature. Also acts as a coolant.
- Grease** Can be retained without elaborate closure. Seals out contamination. Enclosed shielded or sealed bearings are pre-lubricated at the factory, with the right amount of clean grease. Creates long service without re-lubrication.

Standard lubrication for the vast majority of HMS bearings is Chevron SRI #2. Standard fill is 25-35% of the internal bearing void. Many other greases are available through request or application demand. See the below properties chart for some commonly used greases HMS provides:

LUBRICANT CHART

| HMS CODE | TRADE NAME | MFR | TEMP. RANGE (F) | BASE OIL | THICKENER | COLOR |
|----------------------|-----------------------|----------------|-----------------|------------------------------|-----------------------------|-----------------------|
| SRI | CHEVRON SRI #2 | CHEVRON | -20 +350 | PETROLEUM | POLYUREA | DARK GREEN |
| KSRL | KYODO SRL | KYODO YUSHI | -50 +300 | POLYESTER + DIESTER OIL | LITHIUM | LIGHT BEIGE |
| KETK | KYODO ETK | KYODO YUSHI | -40 +390 | POLYESTER + SYNTHETIC | AROMATIC DIUREA | LIGHT BEIGE/ WHITE |
| B325 | BEACON 325 | EXXON MOBIL | -65 +250 | DIESTER | LITHIUM | CREAM |
| AV2 | ALVANIA #2 | SHELL | -30 +250 | PETROLEUM | LITHIUM | BROWN |
| M28 | MOBIL 28 | EXXON MOBIL | -30 +350 | SYNTHETIC | CLAY | DARK RED |
| PEM | POLYREX EM | EXXON MOBIL | -30 +350 | MINERAL | POLYUREA | BLUE |
| KLUBER BEM 34-132 | ASONIC | KLUBER | -31 +284 | SYNTHETIC HYDROCARB ON | ORGANIC SOAP | LIGHT BEIGE CREAM |
| AS5 | AEROSHELL GREASE 5 | SHELL | -9 +350 | MINERAL OIL | MICROGEL | BROWN |
| RWR2 | RETINAX WR2 | SHELL | -22 +248 | PETROLEUM | LITHIUM/ CALCIUM SOAP | DARK GREEN |

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