

Profile of rolling bearing damage (Bearing: KB23)

| Category | | | Unit | Specification/Value |
|-----------------------------------|----------------------|---|-------------------|---|
| General info | | Bearing Type | - | deep groove ball bearing |
| | | Bearing designation (dimension series, bore code) | - | 6203 |
| | | Suffix | - | - |
| Manufacturer specific information | Geometry | Diameter of inner raceway | mm | n/a |
| | | Diameter of outer raceway | mm | n/a |
| | | Pitch circle diameter | mm | 29.05 |
| | | Number of rolling elements | pc. | 8 |
| | | Rolling element diameter | mm | 6.75 |
| | | Length of rolling element | mm | 6.75 |
| | | Nominal pressure angle | ° | 0 |
| | Parameters | Static load rating | N | n/a |
| | | Dynamic load rating | N | n/a |
| | | Speed limit | min ⁻¹ | n/a |
| | | Manufacturer | - | MTK |
| Application specific information | Identification | Bearing code | - | KB23 |
| | | Sample number | - | 11-04 |
| | Place of operation | Installation site | - | 04 |
| | | Installation type (system type) | - | bearing damage test bench (KAt) |
| | | Operator | - | Chair of design and Drive Technology, Paderborn |
| | Operating conditions | Number of load cycles | cycles | 3683000 |
| | | Lifetime | h:min | 21:01 |
| | | Load | N | 3800 |
| | | Dynamic equivalent load | N | - |
| | | Rotational speed | min ⁻¹ | 2900 |
| | | Load direction | ° | 0 |
| | | Comment | - | n/a |

| | | Number of damages | 3 | | |
|---------------|-------------------|---------------------------------------|--|--|--|
| Category | | | Damage 1 | Damage 2 | Damage 3 |
| Damage | Type of Damage | Mode | fatigue | fatigue | fatigue |
| | | Sub-mode | n/a | n/a | n/a |
| | | Symptom | Pitting | Pitting | Pitting |
| | Damage location | Component | IR | IR | OR |
| | | Position of damage | raceway | raceway | raceway |
| | | Damage combination | R | R | R |
| | | Arrangement of the respective damages | random | random | without repetitive damage |
| | Geometry | Length | mm | 1.5 | 3 |
| | | Extent of damage | | 1 | 2 |
| | | Width | mm | 6 | 6 |
| | | Depth | mm | n/a | n/a |
| | | Characteristic of damage | | single point | single point |
| | Damage occurrence | Damage method | lifetime test | lifetime test | lifetime test |
| | | Cause of damage (category) | operating conditions and lubricant | operating conditions and lubricant | operating conditions and lubricant |
| | | Cause of damage (detailed) | overload, wrong viscosity, contamination | overload, wrong viscosity, contamination | overload, wrong viscosity, contamination |

Legend

OR: outer ring

IR: inner ring

S: single damage

R: repetitive damage

M: multiple damage