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When the pump fails!

BEARING FAILURE SYMPTOMS

4c65 Brinelling of rolling elements Scrape marks

Scrape marks

Characteristics:
Axially parallel material displacement at the interval of the rolling elements on the races and rolling elements of cylindrical or tapered roller bearings that can be taken apart. Sometimes clusters of such marks, staggered by a couple degrees to each other on the perimeter. Frequently not on the entire perimeter, but rather only on approx. 1/3 of the perimeter.

Causes:
During assembly, the single ring and the ring with the rolling elements are not concentric or are tipped towards one another and then forced together. This is especially critical with large moving masses (heavy shaft is inserted in the outer ring already press-fitted in the housing with bearing inner ring and rolling elements).

Remedy:
– Use appropriate installation tools
– Prevent misalignment
– Assemble parts, if possible while turning slightly at the same time.

Scrape marks in the race of the inner ring of a cylindrical roller bearing occur due to angled insertion into the set of rolling elements