

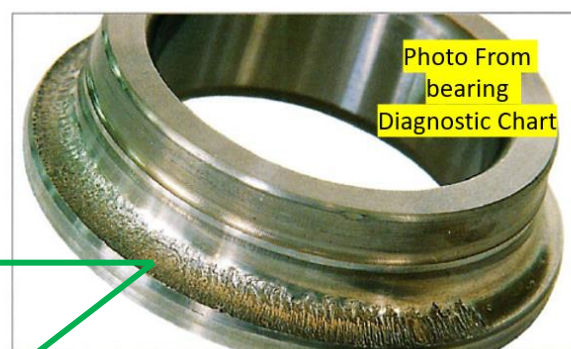


Photo From
bearing
Diagnostic Chart

Photo 7-1-1
Part: Inner ring of an angular contact ball bearing
Symptom: Flaking occurs around half of the circumference of the raceway surface
Cause: Poor lubrication due to entry of cutting coolant into bearing



Photo From UPS -B
bearing Fault Inner Race

Bearing Number SKF 7317 BECBM

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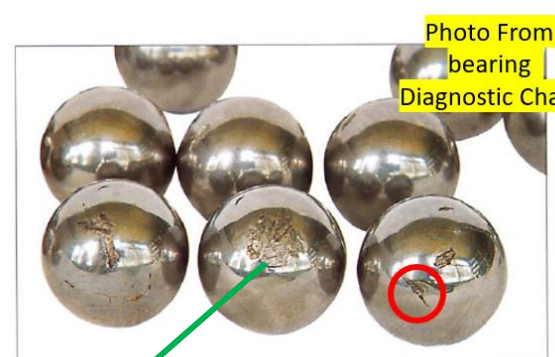


Photo From
bearing
Diagnostic Chart

Photo 7-1-6
Part: Balls of Photo 7-1-4
Symptom: Flaking of ball surface
Cause: Dents due to shock load while stationary

Photo From UPS -B
bearing Fault Rolling
element



Bearing Number SKF 7317 BECBM

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Photo From UPS -B bearing Outer race

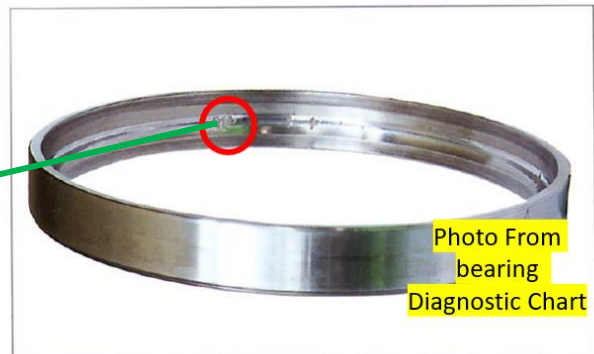


Photo From bearing Diagnostic Chart

Photo 7-1-5

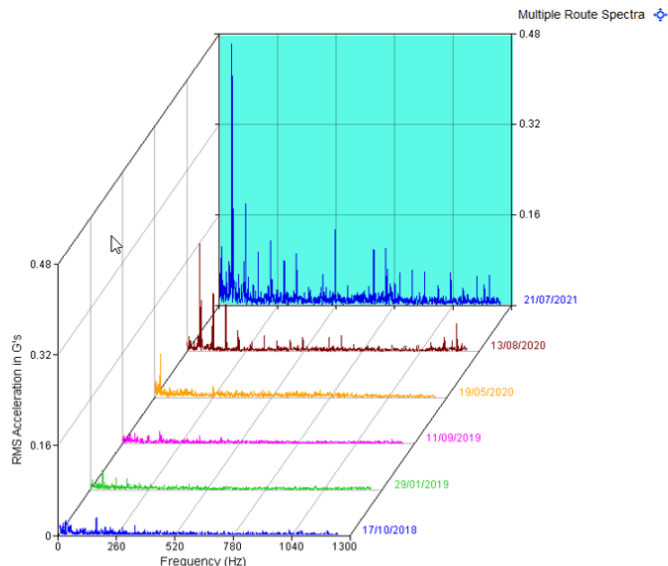
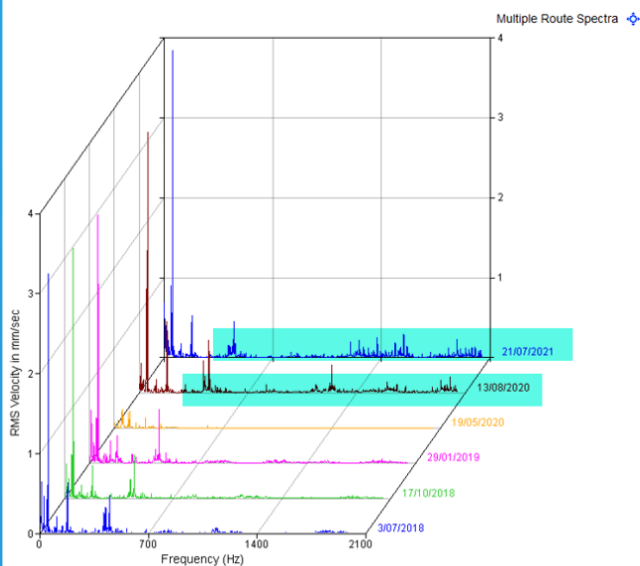
Part: Outer ring of Photo 7-1-4

Symptom: Flaking of raceway surface at ball pitch

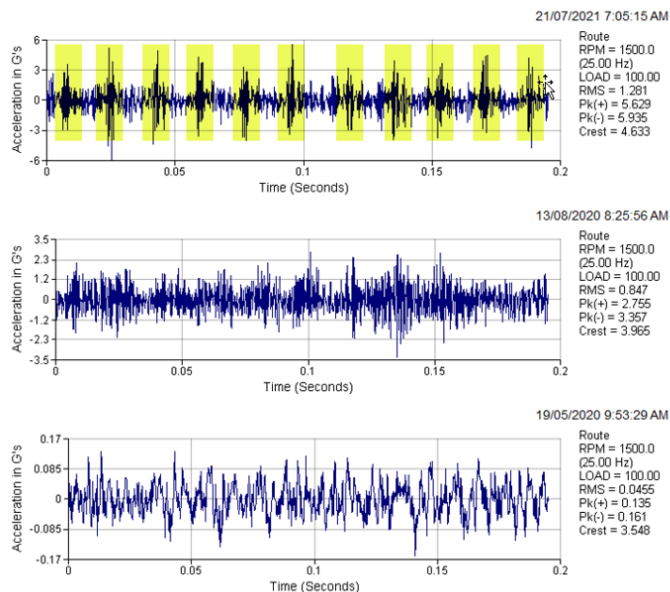
Cause: Dents due to shock load while stationary

Bearing Number SKF 7317 BECBM

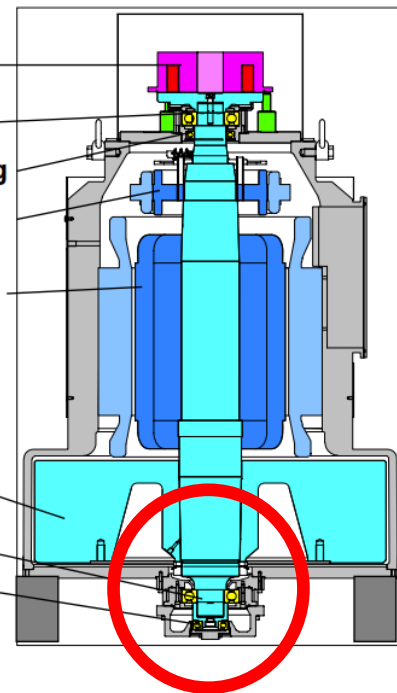
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lift magnet
 upper bearing
 Up. aux. bearing
 exciter machine
 main Engine
 flywheel
 lower bearing
 lower aux. bearing



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7.1 Flaking

Damage Condition	Possible Cause	Countermeasure
Flaking occurs when small pieces of bearing material are split off from the smooth surface of the raceway or rolling elements due to rolling fatigue, thereby creating regions having rough and coarse texture.	Excessive load Poor mounting (misalignment) Moment load Entry of foreign debris, water penetration Poor lubrication, Improper lubricant Unsuitable bearing clearance Improper precision for shaft or housing, unevenness in housing rigidity, large shaft bending Progression from rust, corrosion pits, smearing, dents (Brinelling)	- Reconfirm the bearing application and check the load conditions - Improve the mounting method - Improve the sealing mechanism, prevent rusting during non-running - Use a lubricant with a proper viscosity, improve the lubrication method - Check the precision of shaft and housing - Check the bearing internal clearance

7.2 Peeling

Damage Condition	Possible Cause	Countermeasure
Dull or cloudy spots appear on surface along with light wear. From such dull spots, tiny cracks are generated downward to a depth of 5 ~ 10 μm. Small particles fall off and minor flaking occurs widely.	Unsuitable lubricant Entry of debris into lubricant Rough surface due to poor lubrication Surface roughness of mating rolling part	- Select a proper lubricant - Improve the sealing mechanism - Improve the surface finish of the rolling mating parts

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