



Fig. 5. Bearing lives and effects of contamination.

the following major factors have been identified:

- Wear is proportional to the amount of contaminants.
- Particles larger than the oil film thickness are the most significant.
- Particles with hardness greater than or equal to bearing material hardness will result in significant bearing wear.
- Extreme cleanliness pays off, giving 15 to 35 times longer life compared to expected or calculated lives.
- Water can decrease bearing life and a concentration of water of 0.01 is enough to decrease bearing life to half its original value; however, the effect of water on bearing life is not well understood.

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