

EFFECTIVE DRY LUBRICATION FOR MILITARY HELICOPTER BEARINGS

Dicronite[®] coated bearings did not fail during the test, extending bearing life by more than 533%.



SITUATION

During combat, when military helicopters sustain critical damage, they are vulnerable to sudden loss of transmission lubrication and complete bearing failure within 3 to 6 minutes. Bearing failure requires an immediate emergency landing, potentially in dangerous territory. Increasing the life of power transmission after lubrication loss directly saves lives by increasing chances of escape from hostile territory.

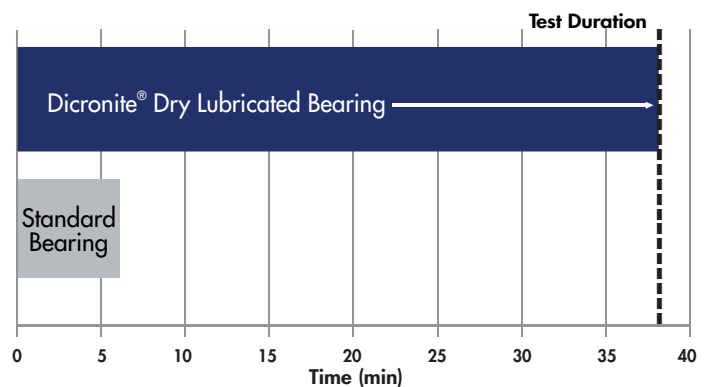
TESTING

The performance of Dicronite[®]-coated bearings was compared to uncoated bearings under sudden lubrication loss conditions.

- Roller bearings were made of M-50 steel.
- Bearings were tested under a 114Kg (250lbf) radial load for 38 minutes.
- Inner race speed was 10,000 rpm.
- MIL-PRF-7808 lubricant was applied to bearings.

RESULTS

- Under lubrication loss conditions, standard bearings failed at a maximum time of 6 minutes, minimum time of 3 minutes
- Dicronite[®] dry lubricated bearings ran for the duration of the test under lubrication loss conditions.



Bearings coated with Dicronite[®] dry lubrication never failed, enabling an emergency landing per the military's test conditions.

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