

Military Helicopter Bearings

Situation:

Combat helicopters are vulnerable to sudden loss of transmission lubrication due to enemy fire. Increasing the transmission life after sudden lubrication loss increases the probability of finding a suitable emergency landing site and directly saves lives

Testing:

The performance of standard bearings and standard bearings with **DICRONITE[®]** dry lubrication was compared under sudden lubrication loss conditions.

- Bearings: M-50 steel roller bearings
- Load: 114 kgf (250 lbf) radial load
- Speed: 10,000 rpm, inner race
- Lubricant: MIL-PRF-7808 lubricant at 65°C (175°F)



Results:

Under lubrication loss conditions, standard bearings failed at a maximum time of 6 minutes, minimum time of 3 minutes.

A **DICRONITE[®]** lubricated bearing ran for the duration of the test (38 minutes), under lubrication loss conditions, a six fold increase. **DICRONITE[®]** increased bearing life sufficiently to enable an emergency landing per the military's test conditions.

