



Proven Precision Dry Lubrication

DICRONITE®



Chain Wear Reduction

Situation:

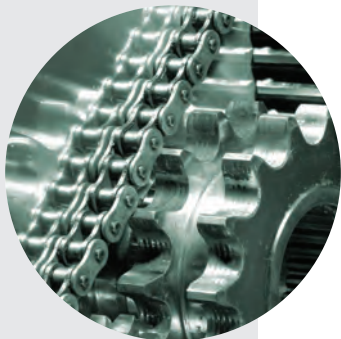
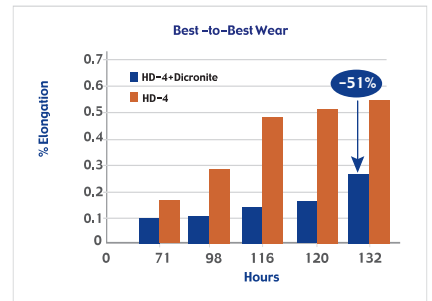
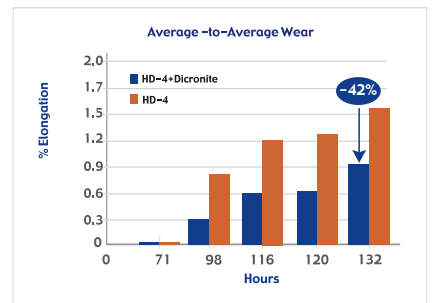
- A major roller chain manufacturer wanted to reduce chain wear and decrease the required lubrication cycle to minimize chain wear. Adding Diconite dry lubrication resulted in less down time and extended maintenance intervals, which reduced overall costs for their customers and enabled the manufacturer to charge a premium

Testing:

- A set of control chains were lubricated with heavy-duty wet lubricant (HD-4); a second set were prepared with Diconite dry lubrication and the heavy-duty wet lubricant (Diconite+HD-4).
- The chains were then run at ambient temperature, a speed of 798 feet per minute, under an applied load of 533 pounds per strand of chain. Chain elongation measurements were taken at 50 pounds per square inch gauge pressure.

Results:

- Testing was stopped at 132 hours (vs. a planned 150 hrs.) due to one of the control group (HD-4) chains breaking for a second time. Two parameters were measured at the 132-hour mark: the number of dry joints and chain elongation.
- On average the Diconite dry lubricated chains (Diconite+HD-4) had 42% fewer dry joints versus the control group of only heavy-duty wet lubricant (HD-4).
- The Diconite dry lubricated chains (Diconite+HD-4) also displayed:
 - An average of 42% less elongation
 - 51% less elongation when comparing best performing from each type
 - 90% less chain wear in the best case
- This translated into longer chain life, increased gear life and lower operating temperatures. As a result, Diconite dry lubrication is widely used in chain driven machinery. Example applications include:
 - Cleanroom/vacuum/inert gas manufacturing environments due to it's inert, non-migrating nature
 - High temperature (up to +538C) applications such as baking ovens, space environments, and high temperature manufacturing environments
 - Radiation exposure environments as the lubricant is unaffected by hard radiation



Diconite is available throughout the world. For more information visit us at: www.diconite.com or contact Lubrication Sciences International at 800.874.4319 • 408.834.7442 • inquiries@diconite.com