

LOCTITE*Adhesives for more
reliable assemblies***APPLICATION CASE HISTORY****No. 242****New Loctite® DuPont® High Temp Bearing
Lubricant Lasts Over Three Months*****Lubrication of Roller Bearing Saves Over \$1 Million Per Year*****Situation:**

One of our customers, a manufacturer of organic intermediates for the pigment industry, runs three 3000 gallon vacuum dryers everyday, 24-hours a day. The roller bearing in each dryer goes into a 6-inch, hollow, high-pressure steam shaft that runs at 390-415°F. They had tried numerous greases, but the greatest life expectancy seemed to be 2-3 weeks, after which the grease would turn to a sticky substance, similar to bubble gum. The day-long process for relubrication included a tear-down of the machine, clean, relube, repack the bearing and then reassemble the bearing. The dryer downtime is estimated conservatively at \$40,000 per day for a minimum of \$680,000 per year per dryer.

If maintenance personnel did not relubricate on time and the bearing failed, a three-to-four-day repair process included welding up and machining the shaft with repair totals of \$10,000 on top of the daily machine downtime cost. This had happened 4-5 times over a couple of years. Maintenance personnel knew there had to be a lubricant that would last longer. That's when they called on Loctite for help.

Solution:

Loctite® DuPont® Krytox® RFE PFPE Bearing Lubricant is the ultimate high performance synthetic grease specifically designed to provide long-lasting lubrication for all types of bearings. PFPE Bearing Lubricant provides excellent wear resistance in the most challenging applications and severe environments. It is effective over a broad temperature range from -15° F to 500°F (-26°C to 260°C), and provides protection from corrosion. PFPE Bearing Lubricant is nonflammable, chemically-resistant, oxygen-safe, and compatible with all plastics and metals.



The roller bearing on this 3,000 gallon vacuum dryer regularly sees temperatures of 390°-415°F, turning regular greases to bubble gum in just two weeks. Loctite® DuPont® Krytox® RFE PFPE Bearing Lubricant lasts over 3 months and has saved this customer a minimum of \$520,000 per year on each of three dryers, resulting in a total annual savings of \$1,560,000.

**Results:**

Even after 12 weeks, the high performance product is still working. According to the Maintenance Supervisor, "It's about time someone came out with a high temp grease that really is a high temp grease. This is the best product we've ever tried."

By providing PFPE Bearing Lubricant, which lasts at least three months, Loctite has saved this customer a minimum of \$520,000 per year, per dryer. With three dryers, the annual cost savings add up to an astounding \$1,560,000.

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