



## CASE STUDY

**“...we have not had a major bearing breakdown since we started using Magnalube-G.”**

**- Superintendent of the Air-conditioning/Refrigeration Department  
of the Physical Plant Div. of Duke University, Bobby Collins**

Air conditioning and refrigeration equipment have unusual lubrication problems. Long periods of inactivity followed by continuous operation, exposure to heat, cold, rain, sun and dust in many installations, and inaccessible locations of system components all contribute to the recognized need for better lubricants in this field. One lubricant, an all-purpose grease reinforced in its lubricity and “staying power” by a suspension of PTFE resin powder is being used to the air conditioning and refrigeration maintenance field with promising success.

At Duke University the superintendant of the Air Conditioning Refrigeration Department reported greatly reduced bearing trouble and, consequently, less equipment downtime in pumps and motors after he switched from conventional greases to PTFE reinforced grease.

The specialized lubricant, Magnalube-G has been used in difficult jobs such as heavy construction and mining equipment, marine material handling and in numerous other high and low temperature applications.



### How It Works:

To ensure continued performance of the grease on equipment operating at high loads and extreme temperatures, Magnalube, Inc. suspends micro particles of PTFE in a special petroleum carrier. As a result, the mechanically and chemically stable compound deposits a fine, protective, and lubricating film on the metal that will continue to function even if the grease is extruded away or the environment degrades or disintegrates the petroleum ingredients.

Since the PTFE-loaded Magnalube-G is water resistant, it provides extended protection against rust in most environments, and does not wash away in rain or snow. Its stability is such that it will not migrate from hot surfaces. The ability of this specialized grease to continually lubricate at temperature ranges from -40°F to 540°F (-40°C to 277°C) provides ample safety margin for difficult applications.

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# “...holds up longer than previously used greases, thus it does not require re-greasing as often.”

## Cooler bearings:

Bobby Collins, Superintendent of the Air-conditioning/Refrigeration Department of the Physical Plant Div. of Duke University, Durham, NC switched to the new reinforced lubricant in his continuing search for cost cutting methods.

He and his 13-man department are responsible for installation of new units and maintenance and repairs of all refrigeration and air-conditioning at Duke University, which includes about 70 buildings of varying size: approximately 12,000 tons of air-conditioning and refrigeration. Air-conditioning units at Duke University range in size from three tons to 750 tons. Collins has been using Magnalube-G for about one year in pumps, pump motors, cooling tower motors, exhaust fans, etc.



He states that since he started using Magnalube-G, equipment bearings are running much cooler and that he has far less breakdown and bearing trouble. He added that Magnalube also holds up longer than previously used greases, thus it does not require re-greasing as often. Collins states that, particularly in high speed motors, he finds a great asset in Magnalube-G because it doesn't break down at high speeds like the other multi-purpose lubricants that he has used.

## Withstands rain storms:

In some of the cooling tower motors at Duke, heavy rains had often washed the oil out of the oil cups. This added a maintenance chore of re-oiling and/or checking them after heavy rains. To avoid this added cost, many of these oil cups have been replaced by grease fittings so that Magnalube-G can be used. They stay greased and the rain doesn't bother them.



For more information on Magnalube:

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