

Customer Testimonial



Monolec® GFS Engine Oil (8420)

Cerametals, Inc. – Houston, Tex.

Stokes Vacuum Pumps

- *Extended oil drain intervals*
- *Reduced oil and oil disposal costs*
- *Reduced amperage from 9 to 7.5, saving \$2,846 annually in electrical costs*
- *Reduced operating temperatures by 15-20 degrees*
- *Cleaned off carbon and wax deposits*

Customer Profile

Cerametals is a manufacturer of carbide cutting tools, chokes, valve gates and seats. They also manufacture geophysical drilling tool bits and a wide range of customer products. They have been an LE customer since 1992.

Application

Stokes vacuum pumps are used to produce a vacuum in the powder processors to dry the carbide powder and on the vacuum furnaces which are used to produce sintered parts.

Challenge

In July 1992, a commercial grade oil was being used to lubricate the plant vacuum pumps. The oil was being changed every eight hours on the two small vacuum pumps, and every week on the four large vacuum pumps. The small vacuum pumps run approximately 2,000 hours a year. This means the oil must be changed 250 times per year.

LE Solution

It was recommended that Cerametals convert to Monolec® GFS Engine Oil (8420) for this application. Monolec 8420 is formulated to handle the high temperatures and contaminants such as sulfuric acid. It will also keep solids in suspension so they will not harm the equipment and can be removed by the filter.



Results

Initially Monolec 8420 was projected to decrease the number of drains by two to four times. In the large pumps actual experience and oil analysis indicate the interval to be 30 days, or four times better than the commercial grade oil. Oil service in the small pumps is currently two times better reducing the number of changes to 125 a year. Currently, oil cost savings are estimated to be reduced by \$773.50.

In addition to the savings on the oil itself, oil disposal costs and the associated liability have been reduced. There are 12 fewer drums to dispose of at \$65 per drum or \$780 per year.

The photographs on the back show the dramatic cleaning performed by Monolec 8420 on the equipment in just 30 days. Monolec 8420 cleaned off the black carbon and wax deposits. Before switching to Monolec 8420, the pump access covers had to be removed approximately every two months so that a hand cleaning with carburetor cleaner could be performed. This work had to be coordinated with plant production personnel



and was usually done on the weekend. Pump operating efficiency would also degrade with the time between cleanings. Pump cleaning is now a thing of the past, and Fred Andriolo, plant engineer states, "Even the oil sight gauge is clear enough to use." This allows other work to be performed and is saving Cerametics \$4,800 annually in labor costs.

Plant personnel measured the amperage on both phases of one vacuum pump prior to installing Monolec 8420. Amperage demand fell 16.6%, or from 9 to 7.5 amps, resulting in an electrical savings of \$2,846 annually. O.A. Stacy, process control manager, also said that pump operating temperatures were running 15-20 degrees cooler after converting to Monolec 8420.



After 30 days using Monolec 8420, deposits have been removed up to the oil level.

Savings using Monolec 8420	
Lubricant	\$773.50
Drum disposal	\$780.00
Labor to remove carbon & wax	\$4,800.00
Amperage reduction	\$2,846.00
Total Savings	\$9,199.50



Thank you to Fred Andriolo, engineer, Mike Babcock, president, and to Jason Wheelless, LE lubrication consultant (pictured), for providing the information used in this report.



Stokes vacuum pump model 212-11 with access with access cover removed. Note the plate is covered with carbon prior to converting to Monolec 8420.

Monolec® is a registered trademark of Lubrication Engineers, Inc.

Based on actual user experience. Individual results may vary. Not intended to supersede manufacturer specifications.

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