

Customer Testimonial



Multilec® Industrial Oil (6802)

Mining Smelter – Montana

Gardner-Denver Electra Saver II Rotary Screw Compressors

- **Reduced amperage**

Customer Profile

This mining smelter processes various precious metals such as platinum and palladium. They have been an LE customer since 1990.

Application

Two Gardner-Denver Electra Saver II rotary screw 75 hp compressors are used for air in the mining smelter.

Challenge

The mining smelter runs virtually 24 hours a day, 365 days a year. The "east" compressor runs continuously, fully loaded, while the "west" compressor runs approximately 10 percent of the time. When the "east" compressor is pushed beyond its capacity, the "west" compressor kicks on. The personnel at the mining smelter wanted to see if the "east" compressor could run more cost effectively.

LE Solution

Jim Pezoldt, LE lubrication consultant, presented LE's ZAP Energy Saving Program and Multilec® Industrial Oil (6802) for this application. An amperage study was done for three months prior to a conversion to Multilec 6802 and continued three months after the conversion.

Results

The amperage readings on the "east" compressor showed an average of 70 amps when the compressor was running loaded and on its own. It was determined that the "west" compressor's usage was too small for an accurate test. The first three months the "east" compressor showed an average amperage reduction of 4.4. However, as time has gone by, using Multilec 6802, amperage readings continued to drop.

After 250 hours	average amps = 71
After 500 hours	average amps = 67
After 750 hours	average amps = 66
After 1500 hours	average amps = 64
After 1750 hours	average amps = 63

The mining smelter pays an average of \$0.04 per kW hour. At an average of 8,000 hours of use annually, this equates to an \$1169.20 cost savings on this one unit. The cost of LE oil, annually is \$100 more than the previous commercial grade product. The mining smelter's net saving annually is \$1069.20.

Oil analysis is being used to safely extend the drain interval of the oil. Based on oil analysis at 8,000 hours, a one-year oil drain has been safely achieved.

Other Products Used

- Duolec® Vari-Purpose Gear Lubricant (1605) is being used in the base metal refinery recently built next to the smelter. Lightnin gearboxes are using Duolec 1605 because it separates from water better and the color coding dye system shows up on the Refinery's infra-red tracking systems. All lubricants must be tracked by infra-red in refineries to insure safety. The previously used 100 percent synthetic lubricant was more expensive, did not separate from water, and required the refinery to mix an infra-red dye into the oil. The cost of this was \$200 for one fill. The smelter is currently switching its gearbox applications to Duolec 1605 as well.
- Almaplex® Industrial Lubricant (1275) is being used at the refinery because of its water seal capabilities and its excellent reversibility characteristics.
- Multilec Industrial Oil (6802) is used in various pumps, compressors and hydraulic units in the refinery. The refinery runs exclusively on LE products.



*Thank you to the mining smelter personnel,
and to Jim Pezoldt, LE lubrication consultant
(pictured), for providing the information used
in this report.*



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