



Monolec® R & O Compressor / Turbine Oil (6402)

Continental Machining Co. – Albuquerque, N.M.

25 HP Sullair Screw Type Air Compressor

- Saves \$1,681 annually in electrical energy costs
- Extended oil drain intervals from 6 months to 12 months

Customer Profile

Continental Machining Co. is located in Albuquerque, New Mexico. The plant machines various components for the aircraft and aerospace industry. Vince Zarrella is the foreman.

Application

In the manufacturing process of the plant, one 25 hp Sullair screw type air compressor supplies all of the plant air that is mandatory for the operation. The air compressor runs 20 hours a day, five days a week and eight hours on Saturday for a total of 108 hours weekly.

Challenge

Vince Zarrella was using a commercial grade synthetic oil in the compressor.

LE Solution

In 1992, LE's Monolec® R & O Compressor / Turbine Oil (6402) and LE's ZAP Energy Saving Program were recommended. Monolec 6402 is formulated with special additives to control deposits and give protection against wear, corrosion and rust. It is nonfoaming in service and contains Monolec®, LE's exclusive wear-reducing additive. Based on the anticipated results of lowering energy costs and providing the utmost in protection for the air compressor, Vince Zarrella agreed to convert the Sullair air compressor.

Results

Prior to conversion, while still using the commercial grade synthetic oil, amperage readings were taken on the unit.

Under full load the unit's amperage measured 63.1 amps. The unit was then drained warm, flushed and refilled using Monolec 6402. When the amperage readings were taken, the unit registered 49.0 amps - a remarkable 14.1 amp reduction in power consumption.

The following formula is used to find the cost of a unit's electrical consumption. This is the same formula used by the local utility company.

$$\begin{aligned} & .\text{Volts} \times \text{Amperes Saved} \times 1.73^* = \text{kW Savings} \\ & \text{kW Savings} \times \text{Hours of Operation Per Year} = \text{kWh Savings} \\ & \text{kWh Savings} \times \text{Electrical Charge} = \text{Energy Savings Per Year} \\ & \text{*Conversion Factor for a 3-Phase Power Source} \end{aligned}$$

$$\begin{aligned} & .240 \times 14.1 \times 1.73 = 5.85 \text{ kW} \\ & 5.85 \times 5200 = 30,420 \text{ kWh Savings} \\ & 30,420 \times \$0.05528 = \$1,681.62 \text{ Annual Savings} \end{aligned}$$

Monolec 6402 saves \$1,681 annually in electrical energy costs for one Sullair air compressor.

While using the previous oil, drain intervals were required at six months. Using LEAPSM (Lubrication Engineers' Analysis Program), they have safely extended the oil drain intervals to 12 months.

Thank you to Vince Zarrella, formena, and to the local LE lubrication consultant, for providing the information used in this report.



Monolec® is a registered trademark and LEAP™ is a service mark of Lubrication Engineers, Inc.

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

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300 Bailey Avenue • Fort Worth, TX 76107 • Fax: 800-228-1142
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800-537-7683