

**6804 MULTILEC® INDUSTRIAL OIL**

**COLLIS COMMERCIAL AVIONICS, A DIV. OF ROCKWELL INTL CORP**

**Ingersoll-Rand 150 hp Air Compressor • SIC 3561 Pumps & Pumping Equipment**

**LE's 6804 MULTILEC® Industrial Oil Saves \$1573.87 Annually**

**CUSTOMER PROFILE**

Collins Commercial Avionics, a division of Rockwell International, is a world-renowned manufacturer of avionics for major airlines and the U. S. Government.

**APPLICATION**

The Collins Commercial Avionics plant uses three 150 hp Ingersoll-Rand reciprocating air compressors. The three compressors run from 7 am to 5 pm, five days a week. They also run a reduced shift from 5 pm to 7 am and run 48 hours on the weekend. Due to less demand for air, they only use two compressors during this non-peak production time. The three compressors rotate the lead. This provides for equal usage and wear on the three units.

**AREA OF INTEREST**

Kelly Collins, Maintenance Supervisor, was interested in extending the compressor drain intervals from the 500 hours they were getting with the specialty grade air compressor oil.

**LE SOLUTION**

The local LE Representative presented ZAP, LE's Energy Saving Program and LE's 6804 MULTILEC Industrial Oil for this application. LE's 6804 is a truly multi-functional, heavy-duty R&O and AW industrial oil suitable for air compressors, hydraulics, bearings, industrial turbines and R&O gear applications. It has outstanding rust and oxidation resistance and water separation ability.

**CUSTOMER COST SAVINGS**

Prior to converting to LE's 6804, amperage readings were taken on the three compressors. An average of a five amp drop was recorded on the compressors that run 7 am to 5 pm. An average three amp drop was recorded on the two compressors that run at night and on the weekend.

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.

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.Volts x Amps Saved x 1.73\* = kW Savings  
kW Savings x Hours of Operation Per Year = kWh Savings  
kWh Savings x Electrical Charge = Energy Savings Per Year  
\*Conversion Factor for a 3-Phase Power Source

<u>Three Compressors (weekdays)</u>	<u>Two Compressors (night &amp; weekends)</u>
$.480 \times 5 \times 1.73 = 4.152$	$.480 \times 3 \times 1.73 = 2.491$
$4.152 \times 7,800 = 32,385.6$	$2.491 \times 12,272 = 30,569.5$
$32,385.6 \times \$0.025 = \$809.64$	$30,569.5 \times \$0.025 = \$764.23$

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Collins Commercial Avionics is not only receiving the benefits of reduced electrical usage, but they are also looking at the cost savings achieved through extended drain intervals. Previous drain intervals were 500 hours. With LE's 6804 MULTILEC Industrial Oil drain intervals have been extended by three times and are still going. Oil condition is being monitored by LEAP<sup>SM</sup> (Lubrication Engineers' Analysis Program).

We want to thank Kelly Collins, Maintenance Supervisor and local LE Representative for the information provided to prepare this report.