# Customer Testimonial

## Quinplex® White Gear Lubricant (4090)

### *City of Burlington-Mackintosh WTP – Burlington, N.C.*

### *Lightnin Mixers*

- **Extended oil drain intervals**
- **Reduced oil usage from 128 gallons to 24 gallons over an 8 year period**
- **Eliminated lubrication related downtime**



#### *Customer Profile*

The City of Burlington – Mackintosh WTP is the largest and newest of the two water treatment plants for the City. The Mackintosh plant, besides supplying water to the city, also supplies water to several other municipalities in the area. The plant treats 12-13 million gallons per day most of the year, but will increase production to 18 million gallons per day during times of high demand (peak capacity). This plant was built in 1980 and they have been an LE customer since 2002. Joseph Rierson is one of the lead operators and primarily responsible for their lubrication program.

#### *Application*

Lightnin mixers are used to agitate six floculator tanks and two flash mixers. These units run continuously, 24 hours a day seven days a week.

#### *Challenge*

Using a commercial grade lubricant, oil drain intervals were at two years. Plant operators were concerned about safety of the water supply since mixers operated above the water with the possibility of oil entering the water from leaks or spills. They wanted a safer oil as well as one that would give superior protection and long service intervals.

#### *LE Solution*

In 2002, the local LE lubrication consultant recommended Quinplex® White Gear Lubricant (4090). Quinplex 4090 is an ISO 220, SAE 90, H1 rated gear oil approved for incidental food contact. It is formulated from USP grade mineral oils which provides excellent load carrying abilities and anti-wear protection.

Two mixers were changed in 2002 to Quinplex 4090. The next year two more and so on until all eight units were converted.

## *Results*

In Spring 2007, Joseph Rieson was concerned about the condition of the oil in the mixers and when the oil should be changed. Jeff Boyles, LE lubrication consultant, introduced him and the staff to LEAP℠ (Lubrication Engineers Analysis Program) to monitor the condition of lubricants and equipment through progressive oil analysis. All units were sampled, oil condition came back in good condition and no change was recommended. The oldest gear oil had been in service for five years.

All units have been sampled each fall since 2007. Oil analysis has shown two units needing changed each year for a total of six units.

Exact cost savings are difficult to determine but four benefits are obvious.

1. By going to two years, oil usage has been reduced by 104 gallons or more than 81% less. In the eight units over the eight year period, oil usage went from 128 gallons (change 8 units, 4 times, 4 gallons per unit) to 24 gallons (change 6 units, 1 time, 4 gallons per unit).
2. Drain intervals safely extended using LEAP oil analysis.
3. No breakdowns or downtime has occurred.
4. Safety concerns are addressed with the H1 rated Quinplex 4090 in addition to providing superior performance and wear protection.

*Thank you to Joseph Rierson, lead operator, and to Jeff Boyles, LE lubrication consultant (pictured), for providing the information used in this report.*





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