Monolec® Synthetic Industrial Lubricant

Cup Manufacturing Company in the Southeast U.S.

Cone Drive Gearbox

- Saved $78,000 in annual equipment costs (projected)
- Saved $6,624 in annual labor costs (projected)
- Reduced annual downtime by an estimated 96 hours

Customer Profile
A cup manufacturing company located in the Southeast U.S. produces single-use products for beverages in the retail and food service markets.

Application
The manufacturer uses Cone Drive gearboxes to turn the cup-making machine.

Challenge
The manufacturer was losing the main cone drive gearboxes at an average rate of one per month, at a cost of $6,500 per gearbox, or an annual loss of $78,000 in equipment costs, in addition to labor costs and downtime. It takes two men six hours to take the old gearbox out and replace the new cone drive. In just one year, it caused 96 hours of downtime. The new maintenance manager wanted to reduce his equipment downtime and increase his plant’s production.

Solution
The maintenance manager asked Mark D. Jones, LE lubrication consultant, if he could help. Mark agreed and looked at several areas. After taking oil samples on 10 Cone Drives, Mark explained to the manager that the company had been using two different types of oils, and that the oils were being mixed. Cone Drives require either an ISO 460- or 680-grade synthetic gear oil due to the constant heat used during production. The lubricants being used were an EP gear oil and an ISO 320-grade synthetic oil. The ISO 320-grade oil could not hold up to the pressure and was breaking down by itself. When the two oils were mixed, the resulting mixture completely collapsed.

Mark recommended that all the gearboxes be flushed with LE’s Monolec® R&O Compressor / Turbine Oil (6405) at no load, and then drained. After the flushing, he recommended the use of LE’s Monolec Synthetic Industrial Lubricant (9460) in the cone drive.

Results
In the first four months after switching to the LE oil, the manufacturer lost no more cone drives. This saved the company $26,000 in cone drives and $552 in labor ($23 per hour), for a projected annual savings of $78,000 in equipment and $6,624 in labor.

The customer is pleased with the results and has made additional reliability improvements, including ESCO oil sight glass levelers and gearbox adaptor kits.

Thank you to the management and maintenance team, and to Mark D. Jones, LE lubrication consultant (pictured), for providing the information used in this report.

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