Customer Testimonial

Duolec® Vari-Purpose Gear Lubricant (1605)

Western Milling LLC – Goshen, Calif.

J&A 1750 Vertical Blender

- ***Reduced temperatures more than 20˚F***

Customer Profile

Western Milling LLC is a large feed mill processing tons of feed and grain per day in custom blends for many of California's Southern San Joaquin Valley mega dairies. The mill receives raw grain via 120 car unit trains, and processes it 24 hours a day, 7 days a week, 365 days a year.

Application

This location in Goshen, California, operates a J&A 1750 vertical blender. The OEM recommendation is for Mobil SHC 630. This key piece of equipment mixes twelve tons per batch (every half an hour) of custom blends of dairy feed. This blender mixes 6 ½ days a week, 24 hours a day.

Challenge

The J&A vertical blender uses hydraulically driven Dervini planetary gear drives. Oil temperatures in the planetaries were beyond 200°F (93°C). Needle bearing life on the planetary drives was suffering from the heat, and the 90-120 day average life was considered short. The oil changes were being done every 90 days.

After several years with great success with other LE products, Stan Dillion, plant maintenance manager, wanted to improve the planetary drive life and reduce oil temperature on the hard working J&A mixer.

LE Solution

Mark Nickel, LE lubrication consultant, recommended Duolec® Vari-Purpose Gear Lubricant (1605), which is a high-performance industrial and automotive gear oil.

Duolec 1605 is formulated using blends of high quiality paraffinic and synthetic base fluids which have been found to

provide excellent oxidation resistance, thermal stability, and film strength. The unique blend of base fluids and thermally stable extreme presure additives resist sludge formation in high temperature gear and bearing applications.

Results

Prior to the conversion to Duolec 1605, the north planetary drive was running at 197˚F (92°C) and the south drive was recorded at 205˚F (96°C) in the summer months. After the conversion to the north planetary drive, the temperature was recorded at 187˚F (86°C) and the south drive was 166˚F (74°C). Ambient air temperature was 67˚F (19°C). Allowing for the difference in ambient air temperature the average temperature reduction was more than 20˚F.

The first fill of Duolec 1605 will be drained and sampled in 90 days. Should results of those tests be satisfactory, the next fill will be taken out to 120 days. LEAP℠ (Lubrication Engineers Analysis Program) testing will be used to establish a target drain interval of at least 120 days. Because of the temperature reductions, Stan Dillion is expecting increased planetary drive life, and increased feed production due to the over 4 hours of time gained per oil change.

Other Products Used

- Almasol® High Temperature Lubricant (1251) —used on several pellet mills
- BTU+ Power Supplement & Cleaner (2420) —used for the diesel fuel for the EMD
- Ultra RDE Oil (8900) —used in the GE EMD GP6 Locomotive

Thank you to Stan Dillion, plant manager, and to Mark Nickel, LE lubrication consultant (pictured), for providing the information used in this report.

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300 Bailey Avenue ❁ Fort Worth, TX 76107 ❁ Fax: 800-228-1142
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www.LElubricants.com
800-537-7683