

APPLICATION
Lauter Tun Gearbox

Brewer Protects 1-of-a-Kind Gearbox with Long-Lasting Gear Oil

CUSTOMER TESTIMONIAL
Regional Brewing Company

CHALLENGE

Protect gearbox from wear while extending drain intervals

SOLUTION

Duolec® Industrial Gear Oil (1605)

RESULTS

- Protected gearbox while eliminating need for frequent oil changes
- Saved \$18,518 in replacement oil cost
- Eliminated 2,350 litres (620 gallons) of waste oil

Customer Profile

This large regional brewing company produces and distributes beer, wine, spirits and other beverages.

Application

Lauter tun vessels are used in breweries to separate mash from wort. A raking machine inside the lauter tun rakes grist and malt or removes the spent grains. The raking machine's height can be varied either electrically or hydraulically, even under load. The lauter tun's Flender H3LV gear unit consists of three gearboxes: primary, secondary and rake lift. The focus of this testimonial is the secondary gearbox, which "is a one-of-a-kind gearbox, and any new components would need to be manufactured," according to the brewery engineer.

Challenge

The secondary gearbox's OEM warranty fill of 235 litres (62 gallons) of a major oil company's product was run to 5,000 hours. The second fill of that same oil was monitored by LE using oil analysis; after 2,500 hours, results showed excessive wear metals and additive depletion.

LE Solution

LE recommended draining the competitor's gear oil after 2,500 hours and replacing it with Duolec® Industrial Gear Oil (1605), a high-performance ISO VG 220 oil that is acceptable for use in any

Results

In the eight years since changing to Duolec 1605, the brewing company has not had to change the oil a single time. With the previous oil, 10 oil changes would have taken place in that same time period. As of 2019, the Duolec in the secondary gearbox was at 25,000 working hours, and the oil analysis report came back with an ISO 4406 cleanliness code of 16/14/11. The forecast is for the LE oil to be in service for nine years, providing additional savings.

Actual documented savings so far – after eight years – are \$18,518 in replacement oil cost, 10 fewer oil changes, and 2,350 fewer litres (620 fewer gallons) of waste oil – a significant reduction in environmental impact – as well as savings on labour, maintenance and downtime.

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industrial gear or bearing application that requires a high thermal stability, extreme pressure lubricant. It is fortified with a shear stable tackifier that promotes adhesion to metal surfaces during use.

LE also recommended the implementation of a lubrication reliability program including Xclude™ breathers, Xtract™ oil sight glasses, regular oil sampling and analysis, and Xtract™ filtration. Together with the new oil, these changes would ensure long-lasting asset protection for the gearbox.

Results (cont.)

“The most important result was that the Duolec stopped the component wear,” said the brewery engineer.

Additionally, LE has documented a 5% to 20% reduction in power consumption for its customers that use Duolec Industrial Oil on various pieces of equipment; the average reduction for gearboxes is 15%. Unfortunately, prior to installing Duolec 1605 in this gearbox, the power consumption was not documented, so it is not possible to show this plant’s energy savings.