

Large Grease Consumption Reduction

MINING (USA)

DRAGLINES

Castrol Molub-Alloy® Mining Greases

Nearly 30% Grease Usage Reduction



THE SITUATION

A large mining company in southern Florida was using a multiservice grease supplied by Company “W”, with high lubricant consumption rate for bearings and open gear lubrication across multiple draglines.

They were experiencing very high bearing temperatures (up to 230-240°F) and excessive failures.

The grease supplied by Company “W” contained a significant amount of Antimony, which created environmental and health concerns for the customer.

RECOMMENDATIONS

The following Castrol mining greases were recommended:

- Molub-Alloy 936 SF Heavy – for open gears
 - Molub-Alloy 777-2 ES – for bearings
 - Molub-Alloy 968 SF Heavy – on draglines with single lube systems for bearings and open gears
- (Note: These Castrol greases do not contain Antimony)

Competitive analysis performed by the Castrol lab indicated the following:

- Up to 50% higher Four Ball wear, Timken and SRV test results (wear protection) of Castrol greases compared to previous grease, equating to longer life of mechanical components.
- Up to 75% higher Timken Retention and Roll Stability test results of Castrol greases, leading to longer lubricant life and significantly lower consumption in the bearings and open gears.

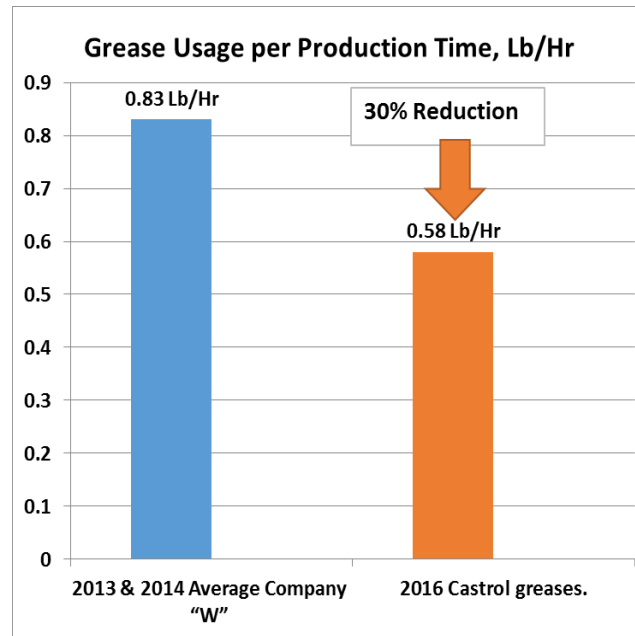
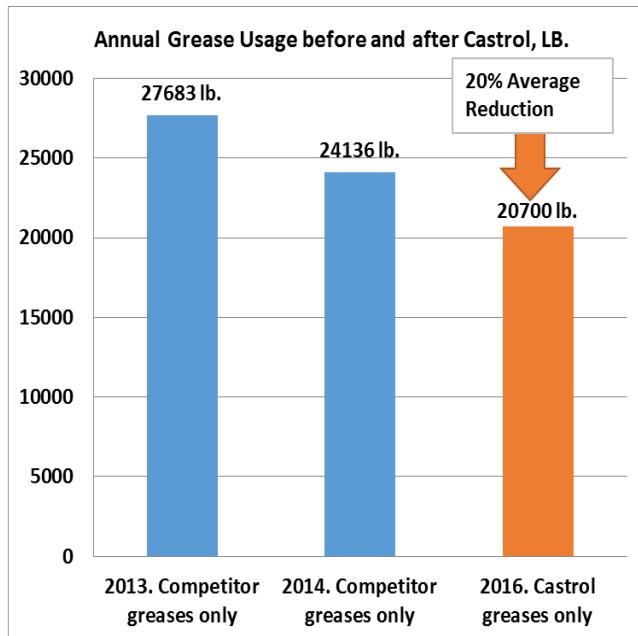
Year of operations	Grease from Company “W”			Castrol Greases	
	2013	2014	2013-2014 Avg	2016	Reduction
Usage per year	27,683 lbs	24,136 lbs	25,909.5 lbs	20,700 lbs	20.1%
Production per year	28,726 hrs	34,626 hrs	31,676 hrs	35,863 hrs	-
Production Usage	0.96 lbs/hr	0.70 lbs/hr	0.82 lbs/hr	0.58 lbs/hr	29.4%

Note: 2015 was the year of transition from competitor’s to Castrol greases and is excluded from the chart.

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CONCLUSION

- 20% annual usage reduction from average 25,910 to 20,700 lbs/year
- Nearly 30% usage reduction per production hour from average 0.82 to 0.58 lbs/hour



Note: 2015 was the year of transition from competitor's to Castrol greases and is excluded from the chart.



The combined effect of using Castrol mining greases at all draglines operated by this mining company is 20% total annual usage reduction and nearly 30% usage reduction per production hour.

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