

## CASE STUDY

# CONSOLIDATING INVENTORY USING ENEAL<sup>®</sup> SYNTHETIC LUBRICANTS

### Introduction

In a large mining operation, it is essential that each piece of machinery remain in top operating condition. This means that operators must keep enough lubricant on hand to ensure that the equipment runs smoothly. With each equipment manufacturer listing different lubricant specifications for different pieces of machinery, the cost to keep adequate quantities of each product in stock soon adds up. Add to that the logistical requirements of managing multiple inventories and supply chains, as well as the potential human errors and accidents, and the need for a consolidated solution quickly becomes apparent.

### Objectives

- Consolidate a broad range of OEM specifications into a smaller number of products, while still maintaining the equipment in proper working order.
- Reduce logistic and inventory storage costs.
- Increase the efficiency and safety of the operation by reducing the potential for human error
- Present the client with several cost-effective options.

### Collecting Data

- Look at the inventory levels required to maintain the equipment currently in operation.
- Examine the equipment operating conditions to ensure proper compatibility.
- Determine the lubrication requirements of each individual piece of machinery.

### Results and Discussion

Initially, the equipment in use required a total seven individual lubricant products – two hydraulic fluids, and five separate gear oils, as shown in the table below.

Three options were presented to the client, each of which reduced the inventory requirement:

- **Mineral Oils:** Using Thermal-Lube's formulation technology, the total number of products required could be reduced to a single hydraulic fluid and only four gear oils.
- **Semi-Synthetic:** This option leads to significant savings, reducing the overall requirements to one hydraulic fluid and three gear oils.
- **Fully Synthetic:** This third option is the most cost effective, where the two initial hydraulic fluids are reduced to one product, and all five gear oils can be replaced by a single "multigrade" synthetic lubricant. A synthetic lubricant will last up to **10 times** longer than conventional, mineral-based products

There are significant savings to be realized in reducing the total number of individual products required. Not only is the per-litre price lower when purchasing in larger bulk quantities, less stock is needed to service the entire operation.

In addition, a higher-quality, longer-lasting synthetic oil will produce tremendous savings by greatly reducing the need to change oil and repair machinery underground.

MACHINERY	HYDRAULIC		GEAR OILS				
	AW 32	AW 46	EP 68	EP 150	EP 220	EP 460	EP 680
Ore Crusher (with conveyor)	2200 L	N/A	N/A	2350 L	410 L	205 L	205 L
Fixed Underground Equipment	615 L	205 L	1135 L	1360 L	N/A	610 L	3400 L
<b>Total Volumes:</b>	<b>2815 L</b>	<b>205 L</b>	<b>1135 L</b>	<b>3710 L</b>	<b>410 L</b>	<b>815 L</b>	<b>3605 L</b>
<b>THERMAL-LUBE'S RECOMMENDATIONS</b>							
<b>Mineral Oil</b> (2,000 to 6,000 hours)	XL-8525/038		XL-8535/068	XL-8535/220		XL-8535/460	XL-8535/680
<b>Semi-Synthetic Oil</b> (4,000 to 10,000 hours)	XL-7305/038		XL-8316/759			XL-8316/140	
<b>Synthetic Oil</b> (8,000 to 20,000 hours)	XL-7325/038		XL-7316/801				