

# Mobil Serv<sup>SM</sup> Engineering team helps mining company enhance haul truck fuel economy



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## CAT 793F haul trucks | Mining company | Nevada, United States

### Situation

A mining company operates 40 CAT haul trucks equipped with differential and final drives. As the company continues to convert from C series to F series haul trucks, the horsepower and loads on the drivetrains have steadily increased and led to increased fuel burn, premature component wear and operating temperatures as high as 195° F. Given that fuel spend is the highest cost for mining, the mine and the **Mobil Serv<sup>SM</sup> Engineering** team collectively identified a strategy to minimize fuel burn and reduce operating temperatures under the heightened horsepower and loads.

### Recommendation

As part of the Mobil Serv program, the **Mobil Serv Engineering** team worked closely with the mine to compare mineral versus synthetic oils in the haul truck drive train. After **Mobil Delvac 1<sup>™</sup> Final Drive and Axle Oil (FDAO)**, an FD1-approved oil formulated to protect from high loads and temperatures in off-highway trucking applications, demonstrated a 3-4 percent fuel efficiency improvement, the **Mobil Serv Engineering** team recommended the mine trial this oil.

### Impact

After trialling **Mobil Delvac 1 FDAO**, the mine observed a 3.5 percent fuel efficiency increase with a controlled on-site test with extensive data and collection instrumentation. Following this success, the mine installed permanent fuel meters on several haul trucks to track and compare the consumption between the trucks running with mineral oil and the trucks with Caterpillar FD1-approved full synthetic **Mobil Delvac 1 FDAO** drive train oil. For nine months, the mine consumed 3.5 percent less fuel than the haul trucks running the mineral oil. As a result of these improvements, the mine agreed to use **Mobil Delvac 1 FDAO** in all of its haul trucks and has become a fill for life in this application combined with a thousand hour preventative maintenance-kidney loop filtration.

### Benefit

The on-site assessment provided by the **Mobil Serv Engineering** team proved that synthetic oil has a fuel efficiency gain over mineral oil. This ultimately helped the mine lower costs per ton by reducing fuel consumption and dramatically lowering oil consumption, generating company-estimated annual savings of US \$1.6 million.

Reduced fuel  
consumption by  
**3.5%**

Industrial  
Lubricants



### Advancing productivity

Helping you reach your Safety, Environmental Care and Productivity goals through our innovative lubricants and services is our highest priority. That's Advancing Productivity. And that's how we help you achieve your broader vision of success.