

Ampol's Hydraulic Solutions Transform Operations for a Major Iron Ore Miner



Mining | Pilbara Region, Western Australia
Total Value delivered: Over \$500k

Situation

A major iron ore mining company in Western Australia, operating a fleet of over 15 large excavators, was facing an unexpectedly high number of premature hydraulic pump failures. The primary issue was oil oxidation leading to excessive varnish formation, which prevented the company from meeting their scheduled pump life targets. They needed a solution to reduce varnish buildup and decrease pump failures while also maintaining the potential for longer oil drain intervals.

Ampol's technical recommendation

Ampol's Technical and Product Solutions (TaPS) team proposed a switch to Mobil DTE 10 Excel™ 46 hydraulic fluid. This premium oil was chosen for its superior ability to dissolve existing varnish and oxidation by-products in the hydraulic system as well as the ability to almost eliminate sludge and varnish buildup compared to standard hydraulic fluids. The transition required no special draining or flushing —just a regular service oil change that typically replaced 50-60% of the fluid in the sump. The switch to Mobil DTE 10 Excel™ 46 began in June/July of 2021 and immediately started showing benefits, as confirmed by MPC (Membrane Patch Colorimetry) testing results.

Value Delivered

The implementation of Mobil DTE 10 Excel™ 46 delivered significant value to the customer:

- **Immediate System Cleanliness:** The oil change quickly reduced varnish levels, leading to cleaner hydraulic systems without the need for extensive maintenance procedures.
- **Extended Pump Life:** The reduction in varnish formation resulted in fewer hydraulic pump failures, allowing the company to meet their scheduled pump life of 8,000 hours per annum.
- **Cost and Time Efficiency:** The use of Mobil DTE 10 Excel™ 46 also created the potential for longer oil drain intervals, reducing the frequency and cost of oil changes and maintenance.
- **Operational Reliability:** With cleaner systems and extended pump life, the company experienced fewer unscheduled breakdowns, ensuring more consistent and reliable mining operations.

Ampol's TaPS Team provided the company with not only an immediate improvement in hydraulic system performance but also long-term operational benefits, reinforcing their commitment to efficient and reliable mining operations.

Conclusion

Ampol's tailored hydraulic solution, featuring Mobil DTE 10 Excel™ 46, not only addressed the immediate challenges of varnish buildup and premature pump failures but also delivered long-term operational improvements. The result was cleaner hydraulic systems, extended pump life, and enhanced reliability, demonstrating Ampol's commitment to driving efficiency and value for its customers.

Ampol Australia Petroleum Pty Ltd

<https://www.ampol.com.au/business/products-and-services/lubricants-solutions>

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This proof of performance is based on the experience of a single customer as outlined above and actual results achieved from switching lubricants will vary from one application to another depending upon many factors including the type of equipment used, its maintenance, operating conditions, environment and any prior lubricant used.

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