

CALTEX MAINTAINED OIL DRAIN INTERVAL AT 500 HOURS IN THE PRESENCE OF HIGHER BIODIESEL CONTENT

Delo® Gold Ultra SAE 15W-40 exceeds 500 hours service life in CAT 793C Truck operating with B30 diesel and 1500 ppm Sulfur content



THE ISSUE

PT Amman Mineral Nusa Tenggara [PT AMNT] operates its Batu Hijau copper-gold mine on the Indonesian island of Sumbawa. The primary hauling trucks consist of 150 Caterpillar 793C with payloads of 240 Tons and operating 24/7 year-round in a pit depth of approximately 1km adding to the severity of the equipment imposed on the lubricants used. The haul trucks are powered with CAT 3516 HEUI engines [2478 HP] and have a typical oil drain interval of 500 hours.

PT AMNT is compliant with all Government policies and as mandate it has changed to B30 diesel across the entire mobile fleet on site. With the introduction of B30 diesel, the oil drain intervals would have to be reduced from 500Hrs to 350Hrs, reducing productivity, lowering availability and adding maintenance cost to the mine - causing a major loss for PT AMNT across its mobile fleet.



COMPANY: PT. Amman Mineral Nusa Tenggara

(PT AMNT)

LOCATION: Sekongkang District West Sumbawa

Regency, West Nusa Tenggara

APPLICATION: Heavy duty offroad trucks in mining

operation

EQUIPMENT: Caterpillar 793C

SOLUTION: Delo® Gold Ultra SAE 15W-40





DELO® GOLD ULTRA SAE

15W-40 WITH ISOSYN™

TECHNOLOGY HELPS PT. AMNT

MAXIMIZE ENGINE DURABILITY

IN THE PRESENCE OF HIGH

BIODIESEL CONTENT





THE SOLUTION

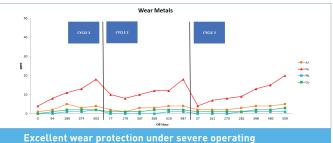
Chevron and our distributor, PT. Petroleum Lima (a long-standing partner of PT. AMNT) have a joint cost reduction program which is ongoing. Chevron and PT. Petroleum Lima decided to take on the challenge to mitigate the impact on oil drain intervals from the switch to B30 diesel by introducing Delo® Gold Ultra SAE 15W-40 engine oil.

Delo® Gold Ultra SAE 15W-40 has proven its reliability in several mining customers in Kalimantan who are able to maintain engine oil drain intervals of 500-hour intervals with B30 diesel across various OEM's equipment. B30 fuel surely affect the performance of the engine which would require operators put more attention to engine maintenance. B30 Diesel can be a major challenge to PT AMNT's operations causing rapid oil oxidation and fuel dilution resulting in reduced oil drain intervals, increased requirement for maintenance and impact to equipment life. But Delo® Gold Ultra SAE 15W-40 with its robust technology is able to mitigate majority of these challenges.



THE RESULTS

A field test was conducted on 3 CAT 793 Off-Highway Trucks and Delo® Gold Ultra SAE 15W-40 successfully achieved more than 500 hours drain intervals. Delo® Gold Ultra SAE 15W-40 has assisted PT AMNT to maintain productivity, maintenance costs and engine life from using B30 diesel, even under the harsh conditions experienced at this mine site. Delo® Gold Ultra SAE 15W-40 is formulated with ISOSYN® Technology which combines a Group II base oils and special additives that rivals the performance of synthetic lubricants. Delo® Gold Ultra SAE 15W-40 has helped our customers reduce Total Cost Ownership and maximize return on heavy mobile equipment investment. Caltex Delo® products are built to keep equipment running.



conditions

Wear metals are kept at a very minimum level after over 500 oil hours, below the strict limits specified on 2009 Cat S.O.S $^{\text{TM}}$ Wear Table Book for Cat 793 OHT, proven through all 3 consecutive field test cycles.



SOLUTIONS DEPLOYED

Caltex Delo® Gold Ultra SAE 15W-40

Caltex Delo® Gold Ultra SAE 15W-40 is a high performance, multigrade, heavy-duty diesel engine oil specifically designed to lubricate a wide range of engines requiring API CI-4 or ACEA E7 performance lubricants. Formulated with ISOSYN technology and approved for use by major global OEMs in the heavy duty industry.

Caltex Advisory

Operating and maintaining today's equipment is more complex and expensive than before, and lubrication requirements are constantly changing. The path to higher efficiency and productivity can start with a Caltex Best-in-Class assessment. Our Caltex Advisory team can perform an in-depth diagnosis on your operational needs and gaps, and provide holistic insights on how and where your business can improve, to help you achieve happier outcomes for your operations.

Caltex LubeWatch

Caltex LubeWatch oil analysis enables you to track the performance of fleet vehicles and equipment that is the lifeblood of your business. Through regular oil analysis, vehicle and equipment life and oil replacement intervals can be optimised and lubricant needs can be identified,



What we're really impressed with is the ability of Delo® Gold Ultra SAE 15W-40 to last beyond 500 hours on B30 with low wear generation and outstanding TBN retention. Delo® Gold Ultra SAE 15W-40 has given us the peace of mind that we needed when we switched to B30 and had concerns regarding equipment life and durability. The cleanliness and wear protection offered by this engine oil helped us reduce maintenance cost and improve equipment durability thus improving our Total Cost of Ownership.

- Sr. Manager, Mine Maintenance PT. Amman Mineral Nusa Tenggara

