

Premium product and base number monitoring leads to valuable savings at Cozumel Engineering

Total annual customer saving

US\$39,000



The Energia y Agua Pura de Cozumel power plant is the first of its kind in Mexico and supplies its network distributors with electrical energy.

Low oil performance led to poor engine cleanliness with problems caused by soot and deposits.

By offering a best-in-class premium product alternative, Shell Argina Oil XL 40, and a comprehensive package of support services to ensure professional base number monitoring and control, the customer experienced a significant improvement of all key performance indicators. This resulted in an annual saving of US\$39,000 across four engines.

Company: Energia y Agua Para de Cozumel

Country: Mexico

Application: Diesel engine

Saving: US\$39,000 per annum across four engines

Key edge: Shell Argina Oil XL 40, Shell Lube**Analyst** and Shell Lube**VideoCheck**

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DESIGNED TO MEET CHALLENGES



1 The Challenge:

The customer was trying to manage the base number depletion without any guidance from their existing lubricant supplier regarding the oil sweetening process. Sharp falls in base numbers had been experienced with two different products. An engine inspection confirmed a heavy build-up of soot and deposits – a direct result of the engine oil base number dropping below a critical level.

3 The Outcome:

The engine is much cleaner than before with fewer deposits in the chamber and valves.

- Through a combination of oil choice and a precise sweetening regime, the top-up volume dropped from 125 litres per day with the previous competitor product to 112 litres per day with Shell Argina XL 40
- Customer visits occur on a weekly basis
- Customer appreciates the peace of mind that comes from 24 hour service and back-up stock support

2 The Solution:

Key to the effective solution was the support services Shell provided in addition to supply of best in class Shell Argina XL 40:

- Shell Lube**Analyst** oil condition monitoring every 100 hours for the first 1,000 hours; next every 250 hours; at present every 500 hours
- Shell base number depletion chart
- Shell Lube**VideoCheck** every 8,000 hours
- Shell backup stock with 20 drums of Shell Argina XL 40 on site
- Regular technical support
- Top up 2% (basic sweetening recommendation approved by customer)

4 The Value:

With a measurable saving of 0.09g/kWh less oil consumption, the financial benefits derived when applying the Shell Lubricants solution to four customer machines over a 12 month period is US\$39,000, excluding the cost reduction in maintenance and less wear.

The savings indicated are specific to the calculation date and mentioned site. These calculations may vary from site to site depending on application, operating conditions, current products being used, condition of the equipment and maintenance practices.

Shell Argina Oil XL

Product solution for Energia y Agua, Mexico

Shell Argina Oil XL is a multifunctional crankcase lubricant for highly rated medium-speed diesel engines operating on residual fuel. Shell Argina XL is designed for conditions of very high oil stress and has been further optimised to improve deposit control.



Improved engine reliability

Extremely high detergency and dispersancy which prevent sludge from forming and keeps crankcases, valves, pistons lands and the critical piston undercrown area exceptionally clean.

An extra high base number (50) which means a satisfactory equilibrium base number level can be maintained in conditions which would be impossible with a 40 TBN oil.

Lower maintenance costs

Good thermal and oxidative stability which resists thickening and results in much longer oil life.

Minimises the wear of piston rings and cylinder liners.

Re-assurance

A comprehensive range of engine manufacturers' approvals.

Main Applications

Medium-speed industrial or marine propulsion and auxiliary engines, burning residual fuel oils, which create conditions of very high oil stress.

These conditions usually occur:

- In newer engine designs, with flame rings, especially from Wartsila.
- Where oil consumption is <0.5g/kWh.
- Where load factors are >90%.
- Where fuels with sulphur >3% are in use.
- Medium-speed engines burning residual fuel need very specialised lubricants.
- Very high stress conditions, found most often in modern Wartsila engines in power plant or ship propulsion applications.

Complementary Products Table

Equipment	Lubricants
Diesel Engine	Shell Alexia 50, Shell Alexia LS, Shell Melina, Shell Melina S, Shell Argina S, Shell Argina T, Shell Argina X, Shell Argina XL, Shell Gadinia, Shell Gadinia AL
Turbocharger	Shell Corena AS, Shell Turbo T
Generator	Shell Alvania RL, Shell Albida
Oil and Fuel Separator	Shell Omala, Shell Omala RL, Shell Morlina



Shell Lubricants

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