

Mobil Planned Engineering Service saves more than US\$30,000 through proactive maintenance*



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Caterpillar 3408 GTA gas engine | Crude oil pumping facility | Casanare, Colombia

Situation

Proactive maintenance of internal combustion engines is a powerful tool that can prevent the high costs related to catastrophic failure. In a Colombian oil field, a Caterpillar 3804 GTA engine was experiencing unusual vibrations during operation. To help diagnose this issue, the maintenance team at the crude oil facility contacted ExxonMobil. Through use of **Mobil's Planned Engineering Service (PES)**, a boroscope inspection of the engine was conducted and results revealed piston damage that was likely caused by condensate liquids ingressed into the combustion chamber.

Recommendation

The diagnosis provided by the boroscope inspection led to immediate engine shutdown and scheduling of the required maintenance. In order to avoid similar damage caused by condensate liquids in the fuel gas, ExxonMobil engineers also recommended that the crude oil company pretreat its fuel gas.

Benefit

Early problem detection allowed the customer to shut down the engine, thereby minimizing damage to the crankshaft, engine cylinder heads and block. Replacing the damaged pistons in lieu of major engine repair resulted in a cost savings of more than US\$30,000, excluding the potential additional losses related to unexpected shutdowns.

The application expertise provided by local ExxonMobil engineering support is helping improve customer productivity potential.

Cost saving of more than
US\$ 30,000

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*This Proof of Performance is based on the experience of a single customer. Actual results can vary depending upon the type of equipment used and its maintenance, operating conditions and environment, and any prior lubricant used.

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