NEPTUNUS
The Machine Reliability Expert

# Oil Quality Management solution unlocks potential savings of ~$108,000 on fleet of 4 rigs over three year contract period

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| **INDUSTRY SEGMENT:** | Oil & Gas |
| **CUSTOMER:** | Jack Up rig operator in India |
| **EQUIPMENT:** | Caterpillar make diesel engines |
| **ARM SOLUTION:** | Real-time oil quality monitoring sensor |

## CHALLENGE

- **High cost of new lube oil** due to frequent oil changes on 5 CAT diesel engines onboard an offshore rig
- **Long response time** (typically 8-10 weeks) for lab reports on oil samples, and **the data by then is outdated.**
- Based on their previous experience, the rig team was manually extending the oil change interval from the OEM recommended 1000 hours to 2000 hours. **However this was not a data-backed decision** and lube oil contamination was frequent.
- The team regretted the **lack of real-time visibility of the oil quality.**
- **~USD 80,000** was being spent on new oil over the 3 years contract period per rig.

## SOLUTION


- Neptunus has been a **preferred partner** to this customer for engine maintenance across their multiple rigs
- The Customer deployed Neptunus' **online oil quality monitoring sensor** (part of Neptunus' **Asset Reliability Management** solution) on all 5 engines of 4 rigs.
- This sensor installed in the oil line continuously monitored oil quality and displayed **overall oil quality index** (combined reflection of 22 parameters like viscosity, moisture, oxidation, particles etc.), **temperature** and the **remaining useful life** of oil. Using IIoT interface & cloud, this data can also be remote monitored & trended.
- This helped the customer make a **confident data-backed decision** to **extend the oil change interval to 3300+ hours.** This was 3 times the standard OEM interval, and 1.5 times of the existing practices.

## BENEFITS

- **Early warning of lube oil contamination!** Lube oil related issues cause 54% of machine failures and these are potentially prevented by real-time monitoring. (Ref: Noria Corporation)
- **On one rig, actual savings over initial 12 month period of deployment of solution = $1800/engine = $9000**
- **Benchmark savings** over the standard OEM oil change recommended interval **per engine ~$110,000** (67% saving of standard lube oil spend per engine of $160,000 over 3 years)
- **For 4 rigs, projected savings** for this Customer over the 3 year contract = **~$108,000**
- **Saving logistical hassles of disposing dirty oil, while being environmentally responsible.**