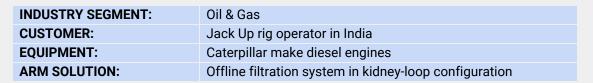


Offline Lube Oil Filtration unlocks potential savings of ~\$60,000 per rig over three year contract period





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- Long response time (typically 8-10 weeks) for lab reports on oil samples, and the data by then is outdated.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.

SOLUTION

- Neptunus has been a preferred partner to this customer for engine maintenance across their multiple rigs
- The Customer deployed Neptunus' offline filtration system in a kidney-loop configuration on one rig.
- This filter with a high beta Ratio of 929 had an effective capability to filter upto 3 micron contaminants along with the moisture and soot. This system is part of Neptunus' Asset Reliability Management solution.
- This solution helped the customer make a confident decision backed by real-time data to
 extend the oil change interval by a factor of up to 4500 hours while enhancing the reliability
 of engines. This was 4.5 times of the standard OEM interval, and 2.25 times of the existing
 practices.





BENEFITS

- Cleaner lube oil leads to fewer breakdowns or failures. Lube oil related issues cause 54% of machine failures. (Ref: Noria Corporation)
- Cleaner components lead to extended MTBO (Mean Time Between Overhauls), less spare part consumption. According to the ISO Cleanliness Code, cleaning lube oil from 20/17 to 17/14 increases diesel engine component life by 2x.
- Actual savings on lube oil changes and inline filter changes on 1 engine over 1 year period ~\$4000
- Projected savings for one rig if deployed on all 5 engines over a 3 year contract ~\$60,000
- Saving logistical hassles of disposing dirty oil, while being environmentally responsible.