SMARTER MAINTENANCE FOR OPTIMISED PERFORMANCE

Keep your equipment healthy, your costs down and your fleets on the move with real-time visibility of your equipment oil life.

Introducing VitalyX
VitalyX, powered by Shell Remote Sense and Bently Nevada is an IoT and advanced analytics-based lubricant condition monitoring service that helps you identify and prevent failures before they occur.

With actionable insights at your fingertips, take proactive decisions to protect and extend equipment life, increase efficiency and optimise maintenance. Moving to a condition-based maintenance schedule will save time and money by preventing equipment breakdowns and vessel downtime.

VitalyX monitors oil parameters in engines, gears and hydraulics to give a constantly updated picture of lubricant condition to immediately identify contaminants and accurately predict oil life.

45% of machine failures can be attributed to poor oil condition monitoring¹

62% of industry staff admit to incidents of incorrect lube management leading to unplanned downtime²

<table>
<thead>
<tr>
<th>Oil conditioning monitoring</th>
<th>Manual monitoring</th>
<th>Shell Lube Analyst</th>
<th>VitalyX</th>
</tr>
</thead>
<tbody>
<tr>
<td>Timings</td>
<td>3 — 10 weeks</td>
<td>1 — 2 weeks</td>
<td>Continuous</td>
</tr>
<tr>
<td>Sampling</td>
<td>Manual sampling</td>
<td>Scheduled sampling</td>
<td>Smart sampling</td>
</tr>
<tr>
<td>Testing</td>
<td>Laboratory testing</td>
<td>Laboratory testing 7 labs globally</td>
<td>Cloud-based, AI-powered analysis</td>
</tr>
<tr>
<td>Reporting</td>
<td>Paper report</td>
<td>Digital reporting</td>
<td>Instant recommendations</td>
</tr>
</tbody>
</table>
How VitalyX works
Maintaining a healthier marine operation

VitalyX is like a 24/7 health check for your marine equipment – your oil is constantly assessed and you receive an instant diagnosis and clear recommendations to prevent things going wrong or getting worse.

**SENSOR**
Gathering raw data on oil and equipment

**SHELL INSIGHT**
30+ years of lubricant analysis expertise

**SHELL REMOTE SENSE CLOUD**
Analysis powered by AI and machine learning

- Asset benchmarking
  Calibrating the model
- Anomaly detection
  Tracking behaviour
- Oil property data modelling
  Predicting outcomes

**ACTIONABLE INSIGHTS AND RECOMMENDATIONS**
Oil condition | Contamination alerts | Remaining oil life

The benefits
Improve your productivity and profitability with VitalyX

As well as helping you avoid unplanned downtime – including expensive catastrophic failures – VitalyX makes it simple to optimise your schedules and extend the life of your oil and your equipment. The net result is a more productive and profitable operation.

Access a complete picture of your lubricant condition 24/7

- Water Ingress
- Viscosity
- Total Acid Number
- Total Base Number
- Fuel Dilution
- Oxidation
- Nitration
- Coolant Contamination
- Soot

React faster with actionable insights and recommendations

- Contamination alerts
- Remaining oil life
- Fine control of oil quality
- Extend oil drain intervals
- Consumption savings

Discover more
Contact your Shell Marine representative or scan the QR code to learn more about VitalyX and the benefits of remote, real-time lubricant monitoring.

---

1 Edelman Intelligence 2015/2018
2 Frost & Sullivan 2018