

# Detect a problem before it becomes one



Alignment issues can be hard to detect. And left unnoticed, can lead to problems.

Problems such as premature wear and breakdown, extensive component failure and large-scale damage to engines, shafts, struts and hulls.

## But it doesn't have to be this way

Our team of industry-leading experts can evaluate and improve the health of marine propulsion shaft lines using our specialist diagnostic tools, software and analytics.

### What can cause it?



Outdated designs or calculation methods



Material or manufacturing flaws



Installation bad practice



Human error



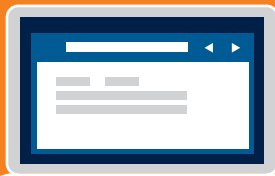
Incorrect performance specifications or lubricants



Changes in operating profile



Hull deflections



### Typically here's how it works:

Contact our Alignment team and send drawings and calculations

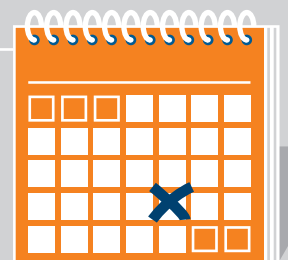


Schedule a dry dock and ensure specialist tools are ready

Followed by an alignment check using our patented gyro-laser technology and digital jack-up system



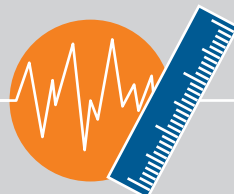
Our engineer comes on-board and performs a visual inspection of the complete shaft line



Your vessel is dry docked



Another alignment check is carried out as well as additional measurements, including bearing wear-down



After the stern tube is drained, the seals are removed and inspected



The shaft line is disconnected and withdrawn



Our engineer can stay on-board to supervise reinstallation and perform a final alignment check



You receive a report with recommended actions



All this data is given to our specialists who perform in-depth analysis

Followed by a raw stern tube alignment check and further bearing measurements



• For further work, we can project manage it, giving you the full support of the **Wärtsilä Service Network**