The ABB Condition Monitoring Retrofit enables regular assessment and continuous monitoring of the non-drive-end (NDE) and drive-end (DE) bearings, the slewing bearing and gear rim, and the steering hydraulics motors and pumps.

In the condition monitoring retrofit work, the existing monitoring equipment is modernized, which enables efficient and reliable monitoring of the shaft-line bearings’ vibration data. Sample-based oil analysis rounds out the condition status evaluation by providing information about the quality of oil samples taken from various pieces of equipment.

Optionally, for the vibration analysis, equipment’s vibration data can be collected from the vessel remotely by ABB.

The Solution
The service includes:
- Updating of the relevant monitoring equipment and fitting of new equipment if necessary
- Sample-based oil analysis for the
  - NDE bearing (thrust bearing)
  - DE bearing (propeller bearing)
  - Slewing bearing and gear rim
  - Steering hydraulics motors and pumps
- Vibration analysis for the
  - NDE bearing (thrust bearing)
  - DE bearing (propeller bearing)
- A ‘health check’ report and recommendations concerning maintenance activities

Benefits
- Fuller understanding and knowledge of the condition of critical components
- Improved availability and safety of operation
- Optimal operation and maintenance performance
- Long-term statistics, supporting continuous development
- Minimization of operation costs
- Early diagnostics and preventive actions, to help avoid loss in production caused by unscheduled downtime
- Improved maintenance planning and reliability of operations
System upgrade
After a study of the existing monitoring equipment, the system is updated to correspond to a standard installation with all necessary technical features.

The standard hardware installation includes:
- a vibration measurement module including data collection units
- DE bearing vibration sensors (2 pcs)
- NDE bearing vibration sensors (2 pcs)
- the necessary cabling and attachment elements
- a data link to the Azipod room (Bluetooth)
- connection to the vessel's network (optional)

Greater reliability through regular check-ups

Oil analysis and vibration analysis

<table>
<thead>
<tr>
<th>DE bearing</th>
<th>NDE bearing</th>
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</thead>
</table>

Oil analysis

<table>
<thead>
<tr>
<th>Steering Unit (STU)</th>
<th>Hydraulic Power Unit (HPU)</th>
</tr>
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Months

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 1 | 2 | ... |

Availability
The Condition Monitoring Retrofit is available for all common Azipod in the V series.

Azipod life cycle services

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For more information please contact your nearest Service Center:

www.abb.com/marine

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Worldwide presence

- ABB Marine and Crane Services
- Azipod Service Center

Azipod® propulsion

An Azipod unit is a podded electric propulsion unit where the variable speed electric motor driving the fixed pitch propeller is in a submerged pod outside the ship hull, and the pod can be rotated around its vertical axis to give the propulsion thrust freely to any direction. Thus the ship does not need rudders, stern transversal thrusters or long shaftlines inside the ship hull.