Alpha Lubricator Upgrade
Slow Steaming Kit

Reduction of cylinder oil costs
In early 2012, a new layout of the Alpha Lubricator in new MC engines was introduced. Along with a number of design improvements, the injection volume and frequency has been changed in order to optimise the cylinder oil consumption at low load.

Now, Alpha Lubricator Upgrade is introduced as a retrofit solution, optimising cylinder oil consumption in existing engines.

A consequence of substantial over-lubrication at low load is generating deposits on the piston crown and rings, increasing the risk of damage to the cylinder liners. In addition, over-lubrication generates excess costs for unnecessary lubrication oil.

The Alpha Lubricator Upgrade is a major improvement of the system. By adapting the new lubricator layout, a complete lubrication optimisation at all engine loads is now possible.

Benefits of upgrading the system
- Cylinder lubrication oil savings of 20-50% at low load
- More accurate feed rate control at all engine loads
- Minimising over-lubrication at low load, reducing deposits, hence improving the cylinder condition
- Implementation of latest design features
- Upgraded interface by latest software version.
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Alpha Lubricator Upgrade is beneficial to all large bore MC engines (70-98 bore) and older installations in small bore engines.

Scope of content
The Alpha Lubricator Upgrade, Slow Steaming Kit, comprises a new MCU, including the latest software, and the improved lubricator layout:

**MCU Mk 2:** New hardware version, plug and play in existing ALCU. New software with upgraded algorithm and system interface.

**Lubricators:** Complete lubricators with all new design features (recommended at the standard 5-year lubricator overhaul) or

**Lubricator kits:** Parts to modify the lubricators for optimised slow steaming operation (require that solenoid valves, accumulators, etc. are in good working condition).

Alpha Lubricator layout

The new lubricator layout reduces the engine power level at which the algorithm, controlling the cylinder oil feed rate, changes. The “breakpoint” is moved to the left. The Alpha Lubricator Upgrade enables the cylinder oil feed rate to follow a lower curve. The marked area in the figure above corresponds to the potential lubrication oil savings from upgrading the system.

Savings example on a 12K98MC-C

<table>
<thead>
<tr>
<th>Lubrication oil consumption at 10% engine load:</th>
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<tr>
<td>Before upgrade</td>
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<tr>
<td>After upgrade</td>
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<td>Yearly savings</td>
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Lubrication algorithm (see Service Letter SL2011-544)