

# COBU – Cylinder Oil Blending Unit

The introduction of scrubbers on-board vessels offers an opportunity for “blended” cylinder oil to match fuel sulphur. With stocks of low and high BN cylinder oil, the blended cylinder oil can match fuel sulphur & engine conditions, providing an additional dimension to optimising cylinder oil application.

Currently the only control of cylinder oil in a two stroke engine is through managing the cylinder oil feed rate. To change the cylinder oil Base Number (BN) the ship must carry multiple grades of cylinder oil with different BNs. The ship must also switch the cylinder oil in the day tank, a tank which has a capacity for at least 2 days cylinder oil consumption.

When ships enter an ECA they must normally change over the cylinder oil day tank to a lower BN ECA cylinder oil at least one day before arriving in the emission control area. Likewise, when leaving an ECA they need to change cylinder oils about 24 hours prior to exit of the ECA. Ships receive different fuels with varying levels of Sulphur.

It is the control of the BN and not the cylinder oil feed rate that is most appropriate for optimising cylinder oil performance with changing fuel Sulphur content.



GOM has developed a unit known as COBU (cylinder oil blending unit) that can blend an approved low and a high BN cylinder oil and produce a cost effective tailored BN cylinder oil adjusted to match the fuel Sulphur content.

The Gulf Oil Marine COBU unit is easy to install, suitable for MAN & WIN G&D, with minimal space requirements due to

its small volume & elegant design. It is fully automated and takes the place of the cylinder oil day tank. The amount of blended cylinder oil is around 30 litres. This means that the unit will blend a fresh batch of cylinder oil about every 1 to 3 hours.

The unit's accuracy in metering of mix as well as metering of flow ensures cost effectiveness, operational convenience, optimal cylinder liner and piston performance.



Using the COBU unit, a ship entering an ECA can match the BN in the cylinder oil to the 0.10%S fuel within 2 to 3 hours and all at the touch of the tabs on a touch screen. This simplifies BN changeover for ECAs, optimises performance and cost of cylinder oil when the BN is matched to the fuel Sulphur content.

The COBU unit enables optimum cylinder liner and piston performance, as it can prevent deposits of excess alkalinity on the crown land which can disrupt liner oil film conditions as the piston passes down the liner.

The COBU unit has remote monitoring capability strengthening the operational and technical coordination between on-shore control centres and the vessel. The bespoke unit can be made to be suitable for use in all vessel classes.

Gulf Oil Marine has run extensive proving trials on a MAN engine vessel and has received the OEM approval for the COBU unit.

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