

CHINESE OWNERS SEEK ANSWERS ON 'ONE FITS ALL' CYLINDER OILS

LEADING CHINESE SHIPOWNERS ARE SEEKING FURTHER GUIDANCE ON CLAIMS FROM CERTAIN LUBRICANTS SUPPLIERS THAT A MID-RANGE BASE NUMBER CYLINDER OIL PRODUCT CAN MEET CRITICAL CHALLENGES SET BY TIGHTENING ENVIRONMENTAL LEGISLATION ON THE SULPHUR CONTENT IN FUEL OILS.

As regulations on emissions tighten over the sulphur permissible in marine fuels, certain lubricants suppliers have responded by launching single solution cylinder oils that they claim will perform consistently well with a wide range of marine fuels.

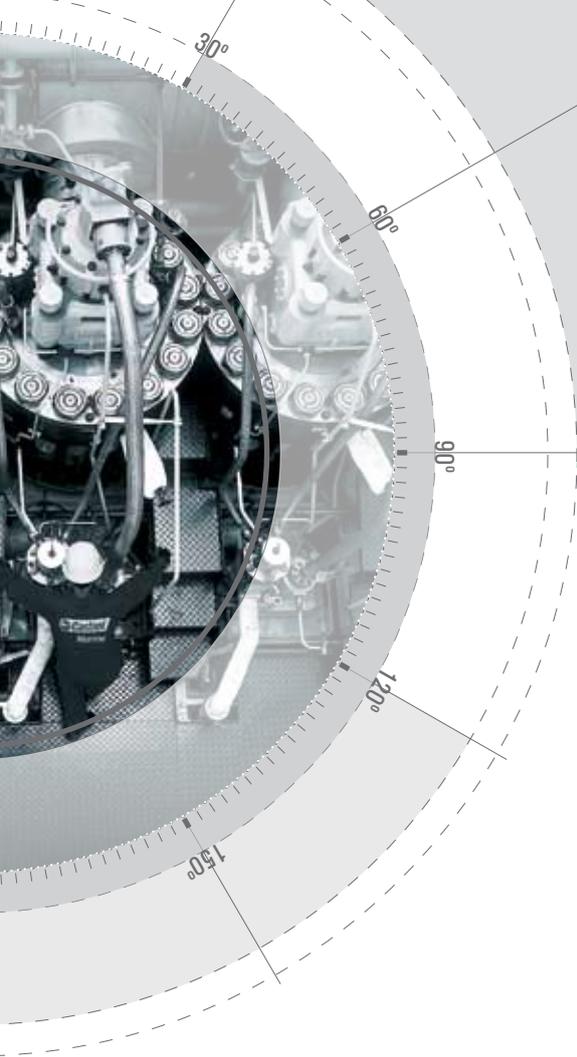
While seemingly attractive, shipowners operating in the key Chinese growth market are already questioning whether the 'one fits all' cylinder proposition will stand up to the full range of operating conditions, particularly in the context of the slower steaming that has become commonplace across the industry as owners pursue cost savings.

The reservations resonate with leading lubricants supplier Castrol Marine, which has adopted what it terms as a 'distinct position' in recommending that a range of cylinder oils is required in order to enable a ship to operate most efficiently, taking into account its fuel sulphur content, engine power and cylinder oil feedrate. Customers need a cylinder lubricant that can allow its ships to operate safely, without compromising engine performance or risking engine damage, and achieve the large fuel cost savings and emissions reductions enabled by slow steaming.

The development of slow steaming practices is a new variable that has made the equation to calculate which cylinder lubricants offer the most efficient cylinder lubrication solution more complex, according to Castrol.

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From January 2012, the maximum sulphur content permitted by the International Maritime Organization dropped from 4.5% to 3.5%. The allowed sulphur content of fuel has already been cut in predefined Emission Control Areas (the Baltic Sea, the North Sea and the English Channel, with North American coastal waters due to follow) from 1.5% to one per cent in 2010 and is due to be cut further to 0.1% from 1 January 2015. The use of heavy fuel oil will still be permitted inside ECAs, but only if ships are fitted with sulphur scrubbers.

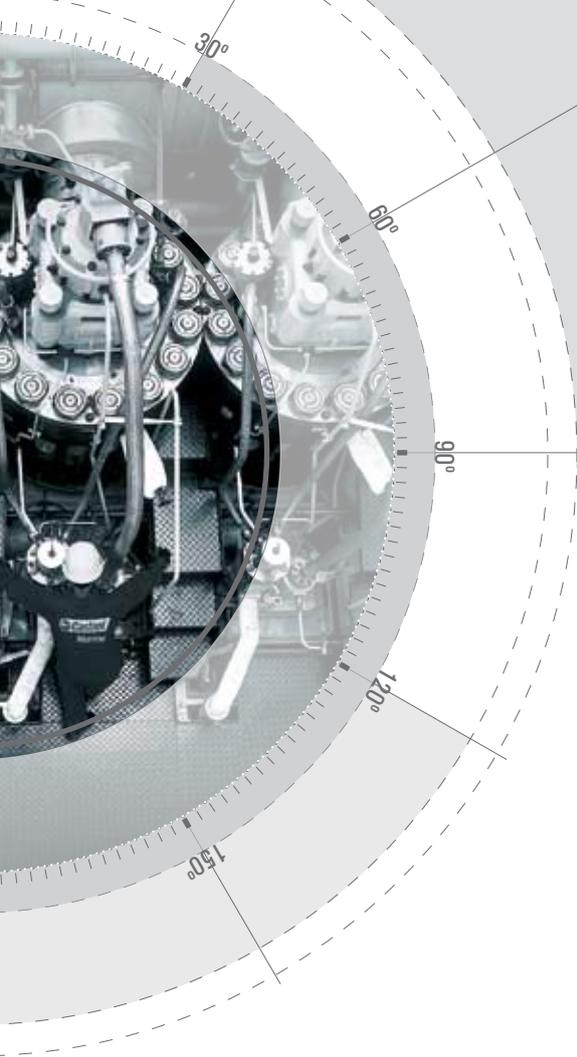
The potential attraction of a 'one fits all' lubricant that works with all bunker fuel types is therefore easy to understand. However, Castrol says that if the appropriate cylinder oil lubricant is not selected under prevailing slow steaming conditions, engines operating on sub-optimal loads may face corrosion on piston rings and cylinder liners. Using an appropriate cylinder oil lubricant is therefore very important to ensure the vessel gets the optimum balance between sulphur content, Base Number (BN) and feed rate which will enable the vessel to operate most efficiently and avoid the risk of engine damage.

Recent engine inspections suggest that the desire for simplicity, which is driving consideration of the 'one mid-range BN fits all' lube, may compromise reliability and lead to engine damage, particularly under slow steaming conditions, the supplier says. It cites a recent service letter from a leading engine maker advising that, when ships are slow steaming, operators should increase lubricant feed rates due to incidences of corrosive wear.

Castrol argues that increasing the BN in cylinder oil is a better alternative to having to increase feedrates for mid-range BN cylinder oils when using higher sulphur fuels. Only by having a comprehensive range of cylinder oils to choose from can owners hope to maximise machinery performance over time across the board, Castrol says.

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Chinese disquiet

One of China's largest ship owners, China Shipping Development Co., Ltd, Tanker Company, indicated its intent to continue requiring a full range of cylinder lubricants from its suppliers. The company, which owns 79 tankers ranging between 40,000dwt and 110,000dwt in size, as part of a larger CSDC operation, estimates that 20% of the lubricants it uses are supplied by Castrol Marine.

Liu Xun Wei, China Shipping Development Co., Ltd. Tanker Company Marketing Department, Shipping Division, said that the owner considered a range of criteria when selecting lubricants. He added that the company also set much store by developing long-term relationships with its lubricant suppliers, with Castrol having established itself as a supply partner over a period of two decades.

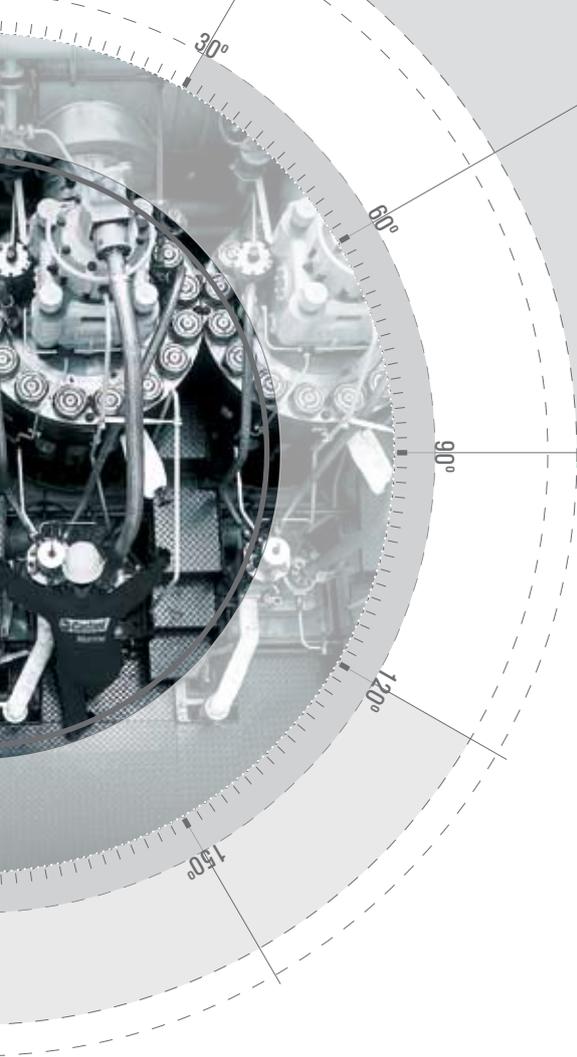
"When we choose the lubricants we use, we consider three main points," he said. "Of course, we consider the competitiveness of pricing, but we also need to be convinced that technical support and port coverage are available. The third, no less critical, consideration is that we can rely on a product that is fit and right for purpose. We take guidance from our trusted lubricants suppliers on key performance indicators."

Tommy T.M. Li, of SWS Ship Management Maritime Consultant Co., Ltd., was more explicit in his concerns about how effective a 'one fits all' approach could be in satisfying the needs of ship operators under the new regulatory regime. The company, which owns 10 handysize bulk carriers, has been specifying Castrol oils for over 15 years and has built up its usage of the supplier's products to meet 100% of its greases, hydraulic oils and cylinder oils needs.

"Clearly, as sulphur content levels are restricted, the concept of a single solution cylinder oil is quite appealing, but we are sceptical," said Mr Li. "It promises an effective and convenient resolution to a difficult problem. But when it comes to a knowledge-based answer, we are of the view that different sulphur content fuels will demand cylinder oils featuring different BNs. We feel more comfortable with the different types of products that Castrol supplies."

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Paul Harrold, Castrol Technology Manager Marine & Energy Lubricants, explained: "Under certain high load conditions, a mismatch between low fuel sulphur levels and cylinder oil BN may lead to excessive deposits on piston crowns, top lands and rings. These are disruptive to effective lubrication of the liner and may ultimately lead to damage of the cylinder liners, bore polishing and scuffing. This can, however, be avoided by using an appropriate cylinder oil designed to counter these problems."

Mr Harrold concluded: "Castrol's position is that the selection of mid-range (50-60BN) cylinder oils as a 'single' solution for all fuel types will not achieve optimal engine operations under all load conditions. Opting for a mid-range lubricant to cover all fuel types, could lead to increased corrosive and/or mechanical wear with consequent unscheduled and costly maintenance costs."

He adds: "If a mismatch occurred between low sulphur content fuels (1.0%) and BN, then OEM guidelines suggest this would not be apparent in performance terms until after 10-14 days. However, if the mismatch were to occur in the case of fuels featuring 0.1% sulphur content, then operational problems would emerge more quickly."

Mr Liu, of CSDC, was in no doubt of how critical it was for shipowners to be kept fully aware of the consequences for their fleets in selecting cylinder oils. "We develop partnerships with suppliers like Castrol who believe in the future. When it comes to our new builds, we can specify the type of new equipment that will operate efficiently in line with new legislation. When it comes to our existing vessels we are particularly dependent on lubricants suppliers to help us to ensure that our equipment is operating to its maximum potential in the current regulatory environment."

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