

CASTROL CYLTECH 40 XDC

HIGH PERFORMANCE
CYLINDER OIL WITH A FOCUS
ON CLEANLINESS AND
DEPOSIT CONTROL



IT'S MORE THAN JUST OIL.
IT'S LIQUID ENGINEERING.

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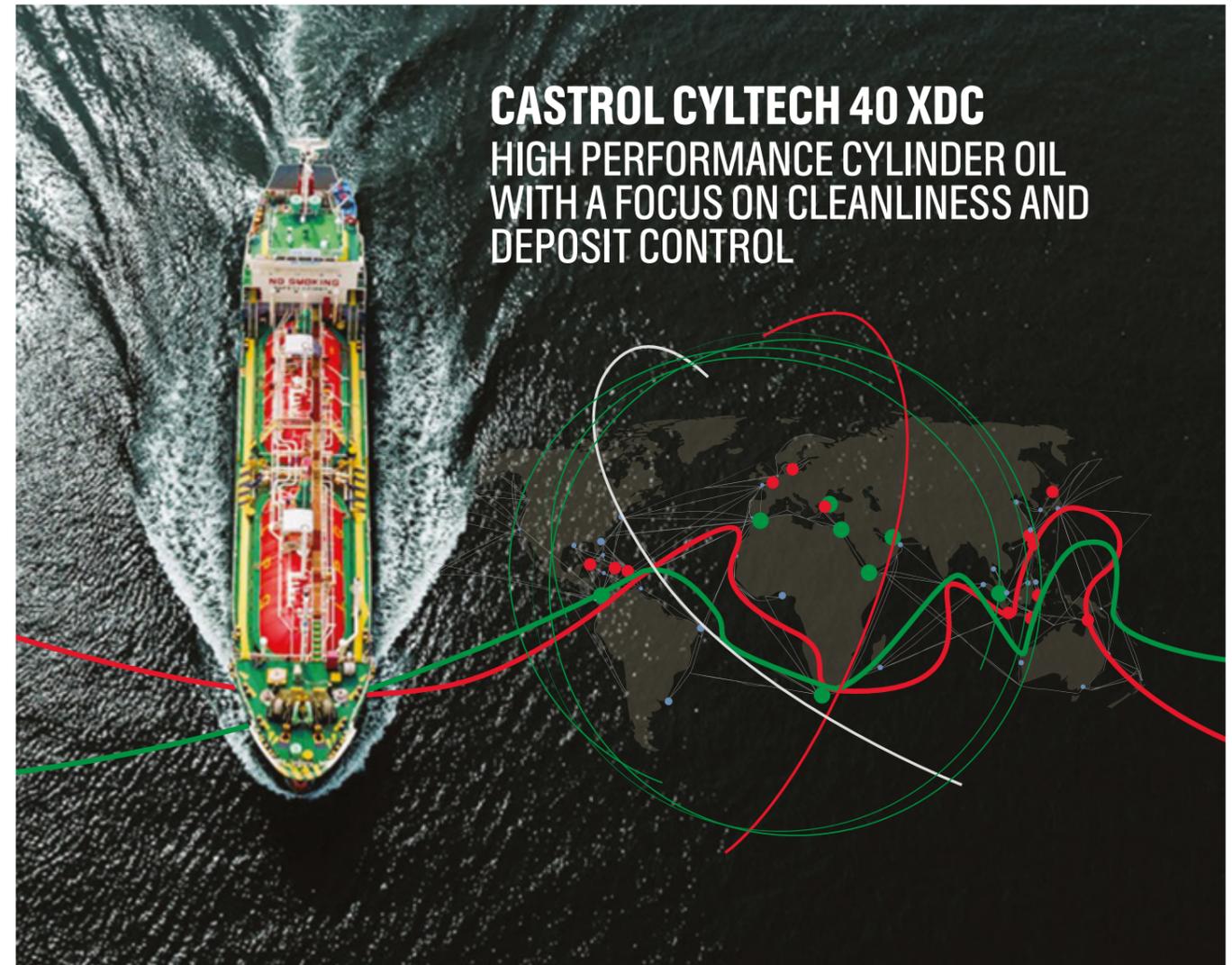


OUR RANGE OF MARINE CYLINDER LUBRICANTS, CASTROL CYLTECH, PREVENTS DEPOSITS AND CORROSION IN YOUR SLOW-SPEED ENGINES.

WE'VE FORMULATED EVERY PRODUCT IN THIS RANGE WITH SPECIAL CARE TO ENSURE YOU GET THE RIGHT BALANCE OF BASE NUMBER (BN) AND DETERGENCY TO PROTECT YOUR ENGINES.

CASTROL CYLTECH RANGE

- Provides the right formulation of BN and detergency to lubricate engines operating on gas or liquid fuels with varying sulphur contents
- Enables simplified vessel operations when operating on a wide range of fuels including LNG and methanol
- Available in over 800 ports around the world



CASTROL CYLTECH 40 XDC
HIGH PERFORMANCE CYLINDER OIL
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DEPOSIT CONTROL

| CASTROL CYLTECH 40 XDC | CASTROL CYLTECH 40SX | CASTROL CYLTECH 70 | CASTROL CYLTECH 100 |
|--|--|---|--|
| <ul style="list-style-type: none"> • Category II 40BN cylinder oil* • Formulated for increased cleanliness in the combustion cylinder • Performance equal to or better than a category II 100BN cylinder oil • Approved across all MAN ES engines and recommended for Mark 9 and higher • Category II lubricant for LNG and methanol** | <ul style="list-style-type: none"> • Bespoke detergency system for engine cleanliness • Very good overall performance, especially deposit control • Excellent performance at optimised feed rates • Approved for use in WinGD DF dual fuel engines running on LNG • Proven performance on biofuels (B30 and B50)*** | <ul style="list-style-type: none"> • Good performance at high temperatures • Lubrication of low speed crosshead engines • Suitable for use with compliant fuel and HSFO, subject to OEM recommendations and technical advice | <ul style="list-style-type: none"> • Protection against corrosive wear • Excellent control of piston ring and cylinder liner wear • Helps extend periods between unit overhauls |

No objection letters

| MAN ES category II | MAN ES category I | MAN ES category I | MAN ES category II |
|---|--|--|--|
| <ul style="list-style-type: none"> • MAN ES category II | <ul style="list-style-type: none"> • MAN ES category I • WinGD DF • JEC | <ul style="list-style-type: none"> • MAN ES category I • WinGD • JEC | <ul style="list-style-type: none"> • MAN ES category II • WinGD • JEC |
| <p>MARINE FUELS ≤0.5% sulphur</p> <ul style="list-style-type: none"> • MGO: marine gas oil, <0.1% sulphur (distillate) • ULSFO: ultra low sulphur fuel oil, ≤0.1% sulphur (residual) • VLSFO: very low sulphur fuel oil ≤0.5% sulphur (residual) | | <p>HSFO WITH SCRUBBERS >0.5% sulphur</p> <ul style="list-style-type: none"> • HSFO: high sulphur fuel oil | |

Castrol Cyltech 40 XDC is a 40BN cylinder oil that has achieved category II status through extensive field tests where it performed equal to or better than a classical 100BN category II reference oil.

Suitable for operations on conventional marine fuels in addition to LNG and methanol, Castrol Cyltech 40 XDC can help you transition to alternative fuels – with no compromise on performance.

Benefits

- **Supporting reliable engine operations** with less deposit observed on the crown lands, grooves and backs of rings
- **Reducing complexity**
 - No need to alternate between high- and low-BN cylinder oils for cleaning-up purposes when Castrol Cyltech 40 XDC is used
 - No need for additional tankage with one oil for all operations requiring 40BN cylinder oil
- **Simplification for one lubricant across the entire MAN fleet:** Cyltech 40 XDC is suitable for all MAN ES engine types and recommended for MAN B&W two-stroke engines Mark 9 and above
- **Supporting your transition to alternative fuels** – with no compromise on performance: Castrol Cyltech 40 XDC is a category II lubricant for LNG and methanol**

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* MAN Energy Solutions (MAN ES) no objection letter for category II cylinder oil Cyltech 40 XDC, 40BN, SAE 50 from Castrol.

** Tests were performed as per the MAN ES category II approval process and Castrol Cyltech 40 XDC was recommended for use with MAN B&W two-stroke engines Mark 9 and higher. Different engine types and different engine operation conditions may require different cylinder lubrication feed rates and or oil type.

*** Based on no harms vessel trials carried out by bp on B30 and B50 biofuel blends with residual fuel (VLSFO) lubricated by Castrol Cyltech 40SX.

CASTROL CYLTECH 40 XDC HAS BEEN GRANTED A CATEGORY II STATUS BY MAN ES

To achieve this performance level, multiple field trials of suitable severity are required and the passing criteria for 40BN oil is to be as good as or better than a category II 100BN oil.*

CATEGORY II SERVICE TEST CONDITIONS

- 7G80ME-C9.2-TII, 2000h – split engine on the same fuel but different cylinder oils
- < 0.5% S VLSFO (0.46 to 0.48 % S)
- Feed rate 0.75 g/kwh

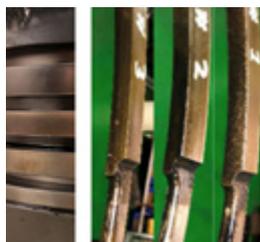
Deposits formation on crown, lands, grooves and back of rings measured at the start and end of the test.

Test result: equivalent to a category II 100BN oil.

Castrol Cyltech 40 XDC
Cylinder 3



Category II 100BN
Cylinder 6



CATEGORY II CONFIRMATION TEST CONDITIONS

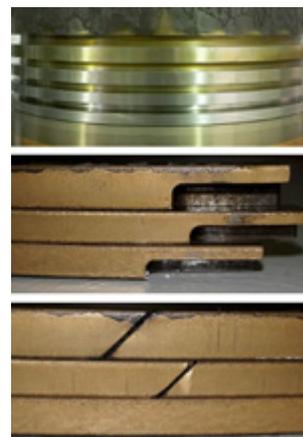
- 8S50ME-C8.2-GI-TII – MAN ES approved severity of engine as suitable for category II
- < 0.10% S ULSFO, 2369 test hours
- Feed rate 0.6 g/kwh
- Three and four piston ring configuration set up

Test result: category II status confirmed.

Start of test
Cylinder 6



End of test
Cylinder 6



* MAN ES Service Letter SL2020-694 Cylinder and system oils.

**Get in touch with your local Castrol representative to find out more about
Castrol Cyltech range and how we can support your marine business on every voyage.**

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