

Action code: AT FIRST OPPORTUNITY

Lubricating Oils for MAN B&W Low Speed Two-Stroke Engines

SL2015-604/DOJA
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Concerns

Owners and operators of MAN B&W two-stroke marine diesel engines.

Summary

Lubrication strategy:

- Use low-BN cylinder lube oils for low-sulphur fuels.
- Use high-BN cylinder lube oils for high-sulphur fuels.

Newer engine types and part-load optimised and derated engines require higher-BN cylinder lube oils.

Dear Sirs

This Service Letter provides a general overview of how to choose cylinder oil to specific engine types. It includes lists of the major international cylinder and system oil brands currently available in the market.

For the ME-GI and ME-LGI gas engine types we recommend using a low-BN cylinder lube oil (15-40 BN) when operating on LNG, methanol, ethane and LPG.

For questions or inquiries regarding the recommendations in this letter, contact our Operation Department at: leo@mandieselturbo.com

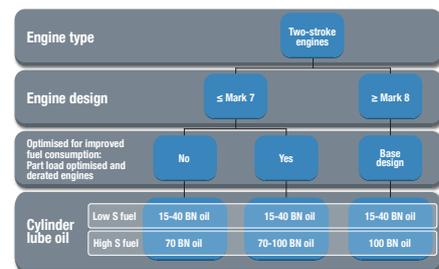
Yours faithfully



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Cylinder lubrication strategy

General lubrication strategy:

- Use high-BN cylinder oil (70-100 BN) when operating on high-sulphur fuels and
- Use low-BN oil (15-40 BN) when operating on low-sulphur fuel.

Fig. 1 illustrates how to choose a suitable cylinder lube oil.

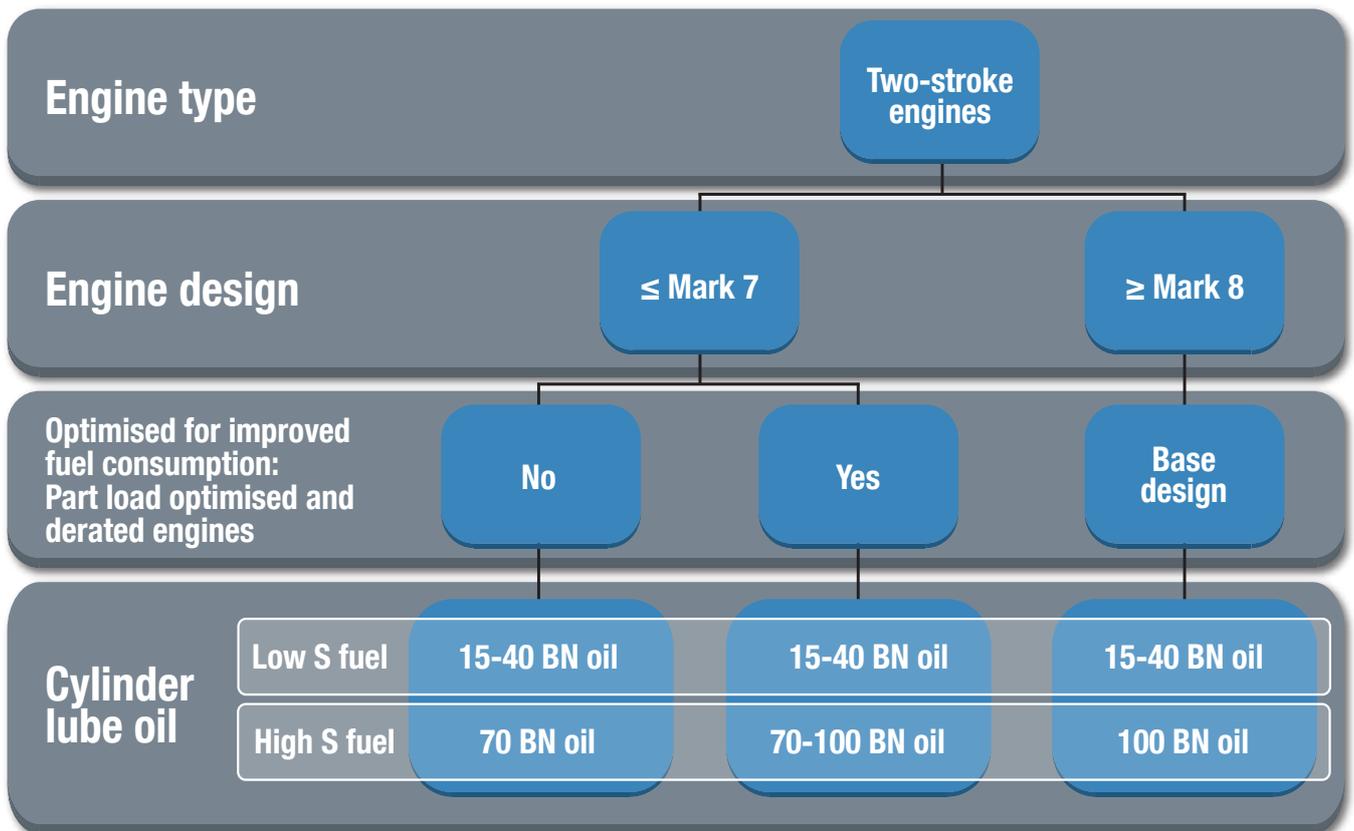


Fig. 1: General overview of cylinder lube oils and how to choose a suitable cylinder lube oil. Low S fuel = low-sulphur fuel incl. distillates, new types of fuels with less 0.1% S (ULSFO), LNG, methanol, ethane and LPG. High S fuel = high-sulphur fuel



Lube oils

The tables below list major international cylinder oil and system oil brands tested in service with acceptable results and which have passed the No Objection testing procedure with acceptable results. Do not consider these lists complete, as other oils and oils from other companies can be equally suitable. Further information can be obtained by contacting MAN Diesel & Turbo in Copenhagen.

Detailed information on lubrication can be found at:

<http://marine.man.eu/two-stroke/service-letters>

Cylinder lube oils

We recommend the use of cylinder lube oils with the following main properties:

- SAE 50 viscosity grade
- high detergency
- alkalinity (BN) in accordance with the fuel sulphur content and engine design.

Oil company	Cylinder oil 100 BN	Cylinder oil 70-85 BN	Cylinder oil 15-40 BN
Applicable to:	All engines	Engines Mark 7 and lower	All engines
Aegean	Alfacylo 100 HS	Alfacylo 570 (70 BN)	Alfacylo 525 DF (25 BN) Alfacylo 540 LS (40 BN)
Castrol	Cyltech 100	Cyltech 70 (70 BN) Cyltech 80 AW (80 BN)	Cyltech 40SX (40 BN)
Chevron	Taro Special HT 100	Taro Special HT 70 (70 BN)	Taro Special HT LF (25 BN) Taro Special HT LS (40 BN)
ExxonMobil	Mobilgard 5100	Mobilgard 570 (70 BN)	Mobilgard 525 (25 BN)
Gulf Oil Marine	GulfSea Cylcare 50100	GulfSea Cylcare EHP 5070 (70 BN) GulfSea Cylcare 8550 (85 BN)	GulfSea Cylcare ECA 50 (17 BN) GulfSea Cylcare DCA 5040H (40 BN)
Indian Oil Corp.		Servo Marine ME 7050 (70 BN)	Servo Marine LB 1750 (17 BN)
JX Nippon Oil & Energy	Marine C1005	Marine C705 (70 BN)	JX C255 (25 BN) Marine C405 (40 BN)
Lukoil	Navigo 100 MCL	Navigo 70 MCL (70 BN)	Navigo 40 MCL (40 BN)
Shell	Alexia S6	Alexia 50 (70 BN) Alexia S5 (80 BN)	Alexia S3 (25 BN)
Sinopec	Marine Cylinder Oil 50100	Marine Cylinder Oil 5070S (70 BN)	Sinopec MCO 5025 (25 BN) Marine Cylinder Oil 5040 (40 BN)
Total	Talusia Universal 100	Talusia HR 70 (70 BN)	Talusia LS 25 (25 BN) Talusia LS 40 (40 BN)

Table 1 – Examples of major international cylinder lube oil brands which carry a No Objection Letter from MAN Diesel & Turbo



Feed rate recommendations for different engine types can be found in our service letters.

Engine types	Latest Service Letters issued on feed rate recommendations
All ME/ME-C/ME-B/ME/MC/MC-C and ME-GI engines	SL2014-593 Guidelines for Operation on Fuels with less than 0.1% Sulphur
All ME/ME-C/ME-B/ME/MC/MC-C and ME-GI engines with electronically controlled lubricators	SL2014-587 Cylinder Lubrication Update Adjusting the ACC factor in service
26-98 bore MC/MC-C with mechanical lubricator 26-50 bore MC-MC-C engines with low topland	SL2000-385 Cylinder Oil Dosage Marine MC engines
26-50 bore MC-MC-C engines with high topland and mechanical lubricator	SL2012-553 Cylinder Lubrication Guidelines Small bore MC/MC-C engines

Table 2 – Cylinder lube oil feed rate recommendations

Oil company	System oil
Aegean	Alfasys 305
Castrol	CDX 30
Chevron	Veritas 800 Marine 30
ExxonMobil	Mobilgard 300
Gulf Oil Marine	GulfSea Superbear 3006
Indian Oil Corp.	Servo Marine 0530
JX Nippon Oil & Energy	Marine S30
Lukoil	Navigo 6 SO
Shell	Melina S 30
Sinopec	System Oil 3005
Total	Atlanta Marine D3005

System oils

We recommend the use of system oils with the following main properties:

- SAE 30 viscosity grade
- BN level: 5-10
- Adequate corrosion and oxidation inhibited
- Adequate detergency and dispersancy.

Table 3 – Examples of major international system oil brands which carry a No Objection Letter from MAN Diesel & Turbo