

Action code: WHEN CONVENIENT

**Cylinder and system oils
MAN B&W low-speed
two-stroke engines**SL2022-728/JUSV
August 2022**Concerns**

Owners and operators of All MAN B&W ME/ME-C/ME-B/MC/MC-C, ME-GI/E-, ME-LGIM/P and ME-GA engines.

Summary

Examples of international cylinder and system oil brands tested in service.

Relevant Service Letters

[SL2019-670 0.50%S fuel operation](#)

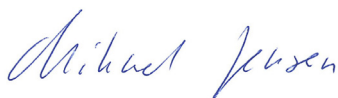
Dear Sir or Madam

This service letter presents the Category II 40 BN cylinder oils which have shown excellent overall performance on MAN B&W two-stroke engines, especially when focussing on cleaning ability. It also provides a general overview of the major international cylinder and system oil brands currently available in the market.

For specific lubrication guidelines, reference is made to the latest lubrication guidelines available for your specific engine type, for example service letters and circular letters. Service letters are available at: <https://marine.man-es.com/two-stroke/service-letters>

For questions and inquiries regarding the content of this letter, please contact our Operation department at: operation2s@man-es.com

Yours faithfully



Mikael C Jensen
Vice President
Engineering



Stig B Jakobsen
Senior Manager
Operation



Head office (& po. address)
MAN Energy Solutions
Teglhølmegade 41
2450 Copenhagen SV
Denmark
Phone: +45 33 85 11 00
Fax: +45 33 85 10 30
info-cph@man-es.com
www.man-es.com

PrimeServ
Teglhølmegade 41
2450 Copenhagen SV
Denmark
Phone: +45 33 85 11 00
Fax: +45 33 85 10 49
PrimeServ-cph@man-es.com

Production
Teglhølmegade 35
2450 Copenhagen SV
Denmark
Phone: +45 33 85 11 00
Fax: +45 33 85 10 17
manufacturing-dk@man-es.com

Forwarding & Receiving
Teglhølmegade 35
2450 Copenhagen SV
Denmark
Phone: +45 33 85 11 00
Fax: +45 33 85 10 16
shipping-cph@man-es.com

MAN Energy Solutions
Branch of MAN Energy Solutions
SE, Germany
CVR No.: 31611792
Head office: Teglhølmegade 41
2450 Copenhagen SV, Denmark
German Reg.No.: HRB 22056
Amtsgericht Augsburg

Cylinder oils

Cylinder oils must be designed to:

1. lubricate pistons and liners
2. reduce friction
3. introduce wear protection
4. minimise risk of seizures
5. neutralise acids and oxidation products in accordance with the engine requirement, and
6. keep pistons, piston rings, ring grooves, ring-lands, and liners clean.

The main property requirements for cylinder oils are:

- kinematic viscosity
 - min. 18.5 cSt at 100°C
 - max. 21.9 cSt at 100°C
- viscosity index (VI): min. 95
- high detergency
- alkalinity or base number (BN).

Category II cylinder oils – all MAN B&W engines and recommended for Mark 9 and higher

In 2020, performance levels were introduced to distinguish between different types of cylinder oils. Cat. II is the overall higher performing category of the two categories (Cat. I and Cat. II). Cat. II cylinder oils have excellent overall performance with a special focus on cleaning ability. To achieve this status, a cylinder oil must complete extensive testing. The lubricants awarded Cat. II status are 40 BN, 100 BN and 140 BN cylinder oils.

Cat. II cylinder oils are suitable for all engine types and are recommended for MAN B&W two-stroke engines Mark 9 and higher, including the ME-GA type engines. Cat. II 40 BN oils may also be advantageous for engines of Mark 8 design and lower. Cylinder oils with 100 and 140 BN are mainly used for high-sulphur fuel applications.

The Cat. II 40 BN oils can be used for operation on <0.10-0.50%S fuels and LNG, ethane, methanol, and LPG.

Category II cylinder oils are recommended for continuous use. Alternating between high- and low-BN cylinder oils for cleaning-up purposes should not be necessary when a Category II 40 BN is used. Choosing a suitable lubricant for the engine has now become easier with the Category II strategy.

Table 1 lists major international cylinder oil brands tested in service with acceptable results, and which have passed the testing procedure and obtained an NOL (no objection letter). Do not consider these lists to be complete, as other Cat. II cylinder oils with NOLs from MAN Energy Solutions can be equally suitable.

Table 1

Company	140 BN	100 BN	40 BN
Castrol	Cyltech 140	Cyltech 100	Cyltech 40 XDC
Chevron	Taro Ultra 140	Taro Ultra 100	Taro Ultra Advanced 40
ENEOS Corporation		ENEOS Marine C1005S	
ExxonMobil	Mobilgard 5145	Mobilgard 5100	Mobilgard 540 AC
Gulf Oil Marine		Gulfsea Cylcare 50100X	Gulfsea Cylcare XP 5040X
Shell	Shell Alexia 140	Shell Alexia 100	Shell Alexia 40 XC
Sinopec Lubricant co.		Sinopec Marine Cylinder Oil 50100	
TotalEnergies Lubmarine	Talusia HR 140	Talusia Universal 100	Talusia HD 40

Table 1: Category II cylinder oils suitable for all MAN B&W two-stroke engines and recommended for Mark 9 and higher. Examples of international cylinder oils for which an NOL has been granted Cat. II status by MAN Energy Solutions.

Category I cylinder oils – MAN B&W engines Mark 8 and lower

Examples of cylinder oils with an NOL issued by MAN Energy Solutions. These oils are applicable for MAN B&W two-stroke engine, Mark 8 and lower. Table 2 lists major international cylinder oil brands tested in service, and which have passed the testing procedure and obtained an NOL. Do not consider these lists to be complete. Other cylinder oils with NOLs from MAN Energy Solutions can be equally suitable.

System oils

Table 3 lists major international system oil brands tested in service, and which have passed the testing procedure and obtained an NOL. Do not consider this list to be complete, as other system oils with NOLs from MAN Energy Solutions can be equally suitable. System oils are recommended for all MAN B&W two-stroke engines, independent of Mark number.

We recommend using system oils (circulating oils) with the following main properties:

- SAE 30 viscosity grade
- BN level 5-10
- high corrosion protection
- good anti-oxidant properties
- high detergency and dispersancy.

Table 2

Company	100 BN - 140 BN	70 BN	40 BN
Castrol		Cyltech 70	Cyltech 40SX*, Cyltech 40
Chevron Lubricants		Taro Ultra 70	Taro Ultra 40
ENEOS Corporation		Marine C705	Marine 405Z
ExxonMobil		Mobilgard 570	Mobilgard 540 X*, Mobilgard 540
Gulf Oil Marine	Gulfsea Cylcare 50140X	Gulfsea Cylcare DCA 5070X	Gulfsea Cylcare DCA 5040X
Shell		Shell Alexia 70	Shell Alexia 40
Sinopec Lubricant co.	Sinopec Marine Cylinder Oil 50140	Sinopec Marine Cylinder Oil 5070S	Sinopec Marine Cylinder Oil 5040
SK Lubricants	SK Supermar Cyl 100 SK Supermar Cyl 140	SK Supermar Cyl 70 Plus	Sk Supermar 40 Plus
TotalEnergies Lubmarine		Talusia HR 70	Talusia LS 40

* Also tested according the new Cat. I requirements.

Table 2: Category I cylinder oils suitable for MAN B&W two-stroke engines Mark 8 and lower. Examples of international cylinder oils with an NOL from MAN Energy Solutions.

Table 3

Company	System oil
Castrol	Castrol CDX 30
Chevron Lubricants	Veritas 800 Marine 30
ENEOS Corporation	Marine S30
ExxonMobil	Mobilgard 300 C
Gulf Oil Marine	Gulfsea Superbear 3006
Shell	Shell Melina S 30
Sinopec Lubricant co.	System Oil 3005
SK Lubricants	SK Supermar AS
TotalEnergies Lubmarine	Atlanta Marine D3005

Table 3: Examples of international system oil brands that have an NOL from MAN Energy Solutions

Notwithstanding the foregoing, it remains the responsibility of the owner/operator of an engine to ensure that suitable fuels and lubes are conditioned and used in order to prevent damage to the engine and other equipment on-board. MAN Energy Solutions disclaims any and all liability and cannot be held responsible for any damage to the engine, engine components or other equipment on-board that may be caused by the use of the mentioned cylinder and system.