

for MITSUI—MAN B&W engines,

Cylinder Lubrication

No.194

APPROVED

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CHECKED

PREPARED

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ENGINE TYPE

All engine types

DATE

2016.03.25

Rev.1 2016.11.18 Cylinder oil reference list (Table3) updated

Rev.2 2020.07.22 Cylinder oil recommended BN range and ref list (Table3) updated

The use of the suitable cylinder lube oil to the specific engine type and the proper feed rate adjustment based on the actual cylinder condition is important in order to keep the good cylinder condition.

This Service Note provides a general overview of how to choose the cylinder lube oil and feed rate recommendations for different engine types.

1. Choice of Cylinder lube oil

Generally, cylinder oil with low-alkalinity is used for low-sulphur fuel, and cylinder oil with high-alkalinity is used for high-sulphur fuel. It is recommended to use BN100 oil on S60ME Mark7.1 and all Mark8 and newer engines when operating on high-sulphur fuel.

Sulphur in fuel, wt%	Alkalinity of Cylinder oil (BN: Base Number)	
	S60ME-C Mark7.1 and Mark8 and newer	Mark7 and previous
$S \leq 0.1$	BN15~BN40 ※ ¹	
$0.1 < S \leq 0.5$	BN40~BN70 ※ ²	
$0.5 < S \leq 1.5$	In case of deposits : BN40~BN100 ※ ³	
$1.5 < S$	BN100~BN140	BN70~BN140

Table 1: Choice of Cylinder lube oil

- ※ 1 If there are no issues on the cylinder condition, BN15~BN25 cylinder oils, that are not listed in Table 3, remaining on board can be used as before.
- ※ 2 Start by using a BN40 cylinder oil.
- ※ 3 Depending on condition, up to 100 BN cylinder oil can be used.

PRIORITY

IMMEDIATELY

☐

**AT FIRST
OPPORTUNITY**

☒

**WHEN
CONVENIENT**

☐

OTHERS

☐

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2. Cylinder lube oil feed rate recommendation

For the MC/MC-C engines, the cylinder lubricating system can be either the Mechanical lubricator (Standard scope of supply) or electronically controlled Alpha lubricator system (Option). For the ME/ME-C/ME-B engines, the Alpha lubricator system is equipped as standard scope of supply.

Feed rate recommendation which is different among the engine types can be found in the following Service Notes.

Engine type / Lubricator type	Service Note issued on the feed rate recommendations
ME/ME-C/ME-B/MC/MC-C/M-GI/ME-LGI_Mark8 and newer and S60ME-C Mark7.1 (Alpha lubricator)	Service Note No.189 Guidance of Cylinder Lubrication for Mark7.1/ Mark8 and newer engines
ME/ME-C/MC/MC-C_Mark7 and previous (Alpha lubricator)	Service Note No.188 Guidance for Cylinder oil consumption in case Alpha ACC for Mark7 and previous engine
ME/ME-C/MC/MC-C_Mark7 and previous (Mechanical lubricator and Alpha lubricator without Alpha ACC control)	Service Note No.183 Guidance for Cylinder oil consumption in case if Alpha ACC is not applied
All engine types	Service Note No.202 Precautions for operation of fuels with maximum 0.50% sulphur

Table 2: Service Note issued on feed rate recommendations

3. Cylinder lube oil brands

Table 3 shows the list of typical cylinder oil brands that are approved by MAN Energy Solutions, and that have been used on Mitsui MAN B&W two stroke engines.

Further information can be obtained by contacting the engine builder or the oil supplier.

Oil company	Oil name	Alkalinity (BN)
BP Castrol	Cyltech 40SX	40
	Cyltech 40	40
	Cyltech 70	70
	Cyltech 100	100
	Cyltech 140	140
Chevron	Taro Ultra 40	40
	Taro Ultra 70	70
	Taro Ultra 100	100
	Taro Ultra 140	140
Cosmo oil lubricants	Cosmo Marine 5040	70
	Cosmo Marine 5070	70
	Cosmo Marine 5100	100
ExxonMobil	Mobilgard 540	40
	Mobilgard 570	70
	Mobilgard 5100	100
	Mobilgard 5145	140
IDEMITSU KOSAN	Daphne Sea master A-50LS	40
	Daphne Sea master A-50N	70
	Daphne Sea master A-50NH	100
JXTG Nippon Oil & Energy	Marine C405	40
	Marine C705	70
	Marine C1005	100
Lukoil	Navigo MCL Extra	40
	Navigo 70 MCL AW	70
	Navigo 100 MCL	100
	Navigo 140 MCL	140
Shell	Shell Alexia 40	40
	Shell Alexia 70	70
	Shell Alexia 100	100
	Shell Alexia 140	140
Total Lubmarine	Talusia LS40	40
	Talusia HR70	70
	Talusia Universal 100	100
	Talusia HR140	140

Table 3: List of cylinder lube oil

If you consider to use the cylinder oils that are not listed in Table 3, please contact us or cylinder oil companies.