

Approval List for Lube Oil in Alternating Natural Gas and Distillate Fuel Oil Operation (SAE 40)

Applicable for MAN ES type medium-speed DF engines

Company	BASE NUMBER (mgKOH/g) (10) 12 - 16
Castrol	Castrol MLC 40 / MHP 154
Chevron	HDAX 9700 SAE 40**
Chevron (Texaco, Caltex)	Delo 1000 Marine 40 Delo SHP40 Taro 12 XP 40 / Taro 12 XP 40 (2) Taro 16 XP 40 / Taro 16 XP 40 (2) Delo 400 TBN10*
ExxonMobil	Mobilgard 412 (Gp1) / Mobilgard 412 (Gp2) Mobilgard 1SHC Mobilgard ADL 40 (Gp1) / Mobilgard ADL 40 (Gp2) Mobil Delvac 1640 (Gp1) / Mobil Delvac 1640 (Gp2)
Fuchs Petrolube	Fuchs Titan MarWay 1040*
Gulf Oil Marine	GulfSea Power MDO 4012S / GulfSea Power MDO 4015S Gulfgem Supreme MDO 412S / Gulfgem Supreme MDO 415S
Shell	Gadina AL 40 / Gadina S3 / Gadina S4 Sirius X40
SK Lubricants	Supermar 13TP40 / Supermar 15TP40
Sinopec	Marine TPEO 4012 / Marine TPEO 4015
TOTAL Lubmarine	Disola M 4015 / Disola M 4012 / Disola 4015 / Disola 4012 Caprano M 40 / Caprano 4015 / Caprano 4012
Vibra Energia (Lubraxis)	Marbrax CCD-410 / Marbrax CCD-415

We do not assume any responsibility for difficulties that might be caused by these oils.

* Sulfur content in fuel max. 1% (10 000 ppm)

** Sulfur content in fuel max. 0.1% (1 000 ppm)