1 Lubrication chart

Edition: 2018-06, replaces edition 2017-05

Marine gearboxes without built-in disc clutch

Lubricant type	***Requirements***
Marine diesel engine oil	• **SAE 40 (ISO VG 150)**
Gear oil	• **FZG ≥ 11**

• Shell Gadinia AL 40[a] • Shell Gadinia S3 40 • Shell Rimula X 40 • Shell Rimula R 3+40 • Shell Argina S2 40 • Shell Argina S3 40 • Shell Omala S 2 GX 150 • (Shell Omala 150) • Shell Omala F 150[a] • Shell Omala S 4 GX 150[a b] • (Shell Omala HD 150[a b])	• Mobil DTE 10 Excel 150 • Mobilgear 600 XP 150[a] • Mobil Delvac 1640 • Mobilgard ADL 40 • Mobil SHC 629[b] • Mobilgard 1 SHC[b] • Mobilgear XMP 150[a] • Mobilgear SHC XMP 150[a b] • Mobilgard 412	• Delo 1000 Marine 40[a] • Taro 20 DP 40 / 40X • Taro 30 DP 40 / 40X • Taro 40 XL 40 / 40X • Taro 50 XL 40 / 40X • Meropa 150 • Meropa XL 150[a] • Meropa Synthetic EP 150[b] • Clarity Synthetic EA Gear Oil 150[c]	• Castrol MHP 154 • Castrol Alpha SP 150 • Hyspin AWH-M 150[a] • Castrol TLX PLUS 204/304/404/504 • Castrol HLX 40[d] • Alphasyn HG 150[b]
• Titan Universal HD 40 • Titan Universal XT 40 • Renolin CLP 150[a] • Plantogear 150 S[c]	• Multi Fluid SAE 40 • Turbo Diesel MD 407[d] • Eco Gear 150 M[a] • Eco Gear 150 S[a b] • Gear Oil 150 F[a]	• Caprano TD 40 • Rubia S 40 • Rubia FP 40 • Carter EP 150 • Caprano MT 40[d] • Disola M 4015[d] • Epona Z 150	• Envirologic GO 150[c]
• Valmarin TP-1240	• Cepsa Petrel HDL 40	• GEM 4-150 N[b]	

a. Oil with greystaining test result “high”

b. Synthetic oil (PAO only)

c. Biologically degradable oils (EAL)

d. NATO approval O-278

Observe when selecting oil for use in REINTJES gearboxes:

- If the oil temperature is lower than
  + 10 °C / 50 °F (SAE 30)
  + 15 °C / 59 °F (SAE 40)
  a sump heating installation is required (special equipment must be fitted to the gearbox).
- Lubricants approved by REINTJES meet all operational requirements and need no further additives. Further additives may even be harmful.
- Highly alkaline engine oils (BN > 20) must not be used with built-in disc clutch.

Observe when changing oil:

- Observe the oil change intervals and oil analysis intervals specified in the operating manual.
- Replace filter elements when changing oil. Clean the venting filter thoroughly. Carry out a first check for contamination approx. 12 hours after commissioning.
- The oil level must be between the dipstick markings. The operating oil volume indicated on the type plate or the drawing of installation is a reference value.
- For flushing and cleaning of the gearbox use the operating oil. Remove cleaning oil from gearbox, oil filter and heat exchanger as thoroughly as possible.
- The gearbox is filled with VCI preservation oil when delivered. When the gearbox is put into operation, drain the VCI preservation oil and fill in operating oil. Any small amount of VCI preservation oil remaining may be mixed with the operating oil.

NOTICE

▶ The oil types listed in the lubrication chart are defined by the responsibility of the oil companies. The oils are suitable for the use in gearboxes and are in accordance with the REINTJES specification. The oil companies are responsible to keep the compositions of the oils identical as specified for this oil chart.

▶ REINTJES is neither liable for correctness of these data nor for any amendments occurring.

▶ If other oils shall be used please contact REINTJES first.

▶ REINTJES does not accept responsibility for any damages due to use of unsuitable oil.

NOTICE

Danger of hydrolysis

EAL lubricants are as a rule based on synthetically produced esters. There is always a danger of the used EAL lubricants to hydrolyse.

▶ Minimise the water content of the EAL lubricant for example by using adsorbers (special equipment).

▶ Observe the special information for EAL lubricants on oil change, flushing, and shutdown periods in the REINTJES operation description BV2379 “Guidelines for changing oil”.

▶ Contact REINTJES service when using EAL lubricants for the first time.