

# 1 Lubrication chart









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## **Marine gearboxes with built-in disc clutch**

The oils must fulfill the advanced requirements on thermal stability at trolling valve operation.

These gearboxes require a high scuffing load capacity.

<b>Lubricant type</b>	<b>Requirements</b>
Marine diesel engine oil	• <b>SAE 30 (ISO VG 100)</b>
Gear oil	• <b>FZG ≥ 12</b>
	• <b>Operating temperature up to 120 °C (248 °F), temporary 130 °C (266 °F)</b>

 <ul style="list-style-type: none"> <li>• Shell Gadinia AL 30<sup>a</sup></li> <li>• Shell Gadinia S3 30</li> </ul>	 <ul style="list-style-type: none"> <li>• Castrol MHP 153</li> <li>• Alphasyn HG 100<sup>a b</sup></li> </ul>	 <ul style="list-style-type: none"> <li>• Taro 20 DP 30 / 30X</li> <li>• Delo 1000 Marine 30<sup>a</sup></li> <li>• Clarity Synthetic EA Gear Oil 100<sup>c</sup></li> </ul>	 <ul style="list-style-type: none"> <li>• Mobil Delvac 1330</li> <li>• Mobil Delvac 1630</li> <li>• Mobilgard ADL 30</li> <li>• Mobil SHC 627<sup>a b</sup></li> <li>• Mobilgear 600 XP 100<sup>a</sup></li> </ul>
 <ul style="list-style-type: none"> <li>• Titan Universal HD 30</li> <li>• Titan Universal XT 30</li> <li>• Plantogear 100 S<sup>c</sup></li> </ul>	 <ul style="list-style-type: none"> <li>• Disola M 3015</li> </ul>	 <ul style="list-style-type: none"> <li>• Multi Fluid SAE 30</li> </ul>	 <ul style="list-style-type: none"> <li>• GulfSea Gear 100</li> </ul>

a. Oil with greystaining test result "high"

b. Synthetic oil (PAO only)

c. Biologically degradable oils (EAL)

**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 the manufacturer's safety data sheet for safely handling the lubricant.

**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.