

**Tightening torque increase on „C“ gearboxes for UL-engines****1) General:**

On gear ratios of $i = 3, 3,47$ and $4,0$ the previously prescribed tightening torque for hex. nut M30 x 1,5 LH **33** (part no. 842 575) of $180 \div 190$ Nm may be insufficient causing the cone sleeve on the propeller shaft to slip and must be increased.

2) Procedure:

Remove propeller, magnetic screw **37**, drain oil, remove 11 Allen screws **35**. Detach the gearbox cover **22** with a plastic hammer from the gear housing **9** (slide fit of propeller shaft moves easily, but the dowel pins **20** for centering fit tight).

Remove complete gearbox cover **22** with propeller shaft **30**. Fix propeller flange on a suitable support (e.g. by screwing it to a U-profile with holes drilled to match the holes on propeller flange) clamped in a vice. Remove hex. nut M30x 1,5 LH **33** (attention: left hand threads!).

Place protection mushroom 877 415 onto propeller shaft **30** and remove the layshaft gear **17** with puller 877 375. Check all parts for damage and wear, replace if necessary.

Before re-assembly, the propeller shaft (in the area of the cone sleeve seat and threads), the cone sleeve **31** (inside and outside), the layshaft gear **17** (cone and face) and hex. nut M30 x 1,5 LH **33** must be degreased and rests of LOCTITE be removed. Push cone sleeve **31** and layshaft gear **17** onto propeller shaft **30**, apply LOCTITE to both sides of friction washer **32** with LOCTITE 648 and fit it with convex side towards outside, apply LOCTITE 221 on threads of hex. nut M30 x 1,5 LH and tighten.

New tightening torque: 300 Nm (2650 in.lb).

Remove excessive LOCTITE.

Apply LOCTITE Anti-Seize to the bearing seats of propeller shaft **30** and pinion shaft **17**. Clean sealing surfaces, fit gearbox cover with new gasket **21** (dry!). Tightening torque for gearbox cover screws **35** M6 x 30: 10 Nm.

Fill gearbox with the prescribed quantity of oil, tighten the remaining screws and secure them with wire-lock.

**3) Parts needed for this procedure:**

Gasket (if damaged) 950 210
 protection mushroom 877 415
 puller assy. 877 375
 other tools needed for „C“ gearbox repair - see parts list no. 729 for 582 UL.

4) On which gearboxes the tightening torque must be increased?

Gearboxes with production code „OX“ and above have already been tightened with torque 300 Nm. Gearboxes marked with production code „OW“ and below must be retorqued to 300 Nm.

Production code: Consists either of 2 letters or 1 letter plus 1 number. They are increasing with alphabetical order or numbers.

...LA, LB, LC,... LZ; L1, L2,...L8;
 MA, MB,MZ; M1, M2 ...M8; NA...OV,
 OW - OX, OY, OZ; O1, O2, ...

This production code is punched on the gearbox housing behind the gear ratio.

Example:

3,47 NP

production code before OX, i.e. tightening torque of nut M30x1,5 LH must be increased to 300 Nm.

reduction ratio

EXCEPTION: On gearboxes with production code before OX but at that time still in the factory, the tightening torque has already been increased to 300 Nm. These gearboxes have been marked with a **double line** above the production code.

e.g. OM

