



Service Letter

SL05-451/AAB  
June 2005

**Updated Top Clearance Range  
Thick Shell Main Bearings  
Engine Type: K/L/S 50-90MC  
Action Code: When Convenient.**

Dear Sirs

The service experience has shown that a reduction of the top clearance to the lower limit of our present tolerance range will improve the fatigue performance of the thick shell bearings. This experience has been complemented and confirmed by a number of elasto-hydrodynamic calculations, which show that local fatigue load will, as a rule, be reduced when the top clearance is reduced.

However, it is the general belief that lowering the top clearance will result in an increase of the temperature level in the bearing. As a consequence, tests have been made to estimate the actual temperature rise. Thermocouples were fitted to the main bearing with the highest dynamic load on an 8S50MC. The results showed that lowering the clearance from the normal value of 0.35 mm to 0.10 mm only caused an increase of the maximum temperature of 1 - 2°C, still well below our temperature limit.

On the basis of the above, we have specified the top clearance for thick shell main bearings in new engines according to the table below:

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<b>Main bearing top clearance (mm/100)</b>					
Engine	50MC	60MC	70MC	80MC	90MC
Min.	10	10	15	20	25
Max.	35	35	40	45	50

In addition, the specification has now been simplified, as it does not distinguish between aftmost and remaining bearings anymore.

#### Implementation on engines in service

As the majority of the main bearings in service are performing very satisfactorily, the above-stated standard top clearances should only be implemented when a main bearing is opened for inspection – or in the event of a main bearing failure.

In addition, we would like to draw your attention to the following service letters regarding main bearings: SL98-355/SBJ, SL00-378/NHN and SL03-414/AAB in which SL00-378/NHN and SL03-414/AAB are relevant in terms of correct adjustment and shim amount and with regard to updates on bearing types.

Furthermore, we emphasise that MAN B&W Diesel A/S does not recommend unduly opening up of main bearings for overhaul or inspection if they are otherwise performing well.

Questions or comments regarding this Service Letter should be directed to our Dept. 2300.

Yours faithfully

MAN B&W Diesel A/S

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