MAN Diesel

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Service Letter SL07-474/JJP March 2007

Lifting Tool for Crosshead Bearing Cap 80-98MC/MC-C and ME/ME-C Engines

Action Code: IMMEDIATELY

Dear Sirs

Recently one of our service engineers experienced a broken lifting tool for a crosshead bearing cap.

This happened in connection with overhaul of a crosshead bearing on a 98-bore engine. An extension stud for a lifting eyebolt broke during lift of a crosshead bearing cap. There were no personnel injuries in connection with the incident, which resulted only in minor damage to one of the guide bars.

This tool has been specified for more than 12 years, and this is the first incident of this kind. The broken extension stud has been investigated and the following conclusion of the investigation was made:

The stud has not been made from adequate material and, equally important, it appears not to have been machined as specified. One important fillet was smaller than specified. Furthermore, the thread tap on the extension tool seems to have been pre-bent from an earlier lift.

Therefore, to avoid accidents, we recommend engine crews and other service personnel to follow the enclosed safety instruction, S904, regarding lifting tools and handling of crosshead bearing caps.

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We recommend engine crews to check the fillets on the lifting tools, see Fig 1.

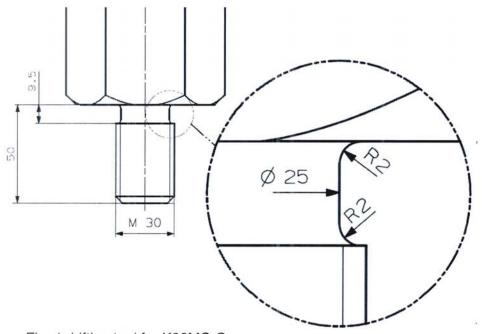


Fig. 1: Lifting tool for K98MC-C

If an insufficient fillet or signs of cracks, bending or other misuse is found, we strongly recommend to discard the extension stud and order a new one, either from the engine builder or from MAN Diesel A/S, PrimeServ in Copenhagen.

Questions or comments regarding this service letter should be directed to Dept. LEE3.

Yours faithfully

MAN Diesel A/S

Carl-Erik Egeberg

Leif Hauerslev

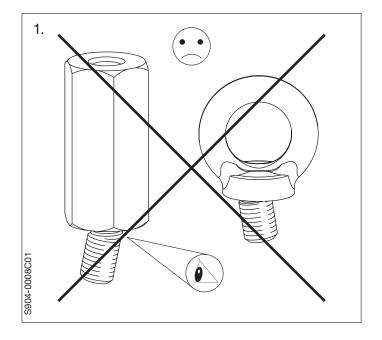
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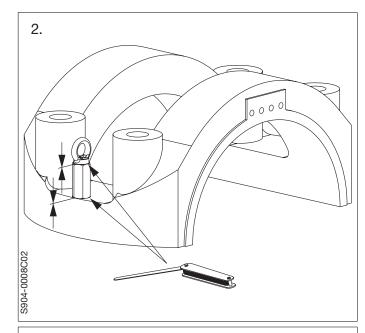
Handling of crosshead bearing caps:

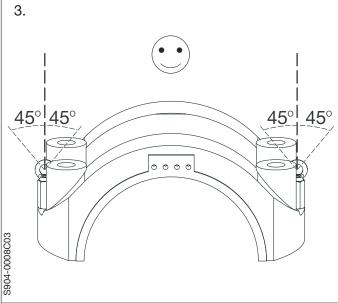
In connection with inspection and overhaul of the crosshead bearings, where it is necessary to lift the bearing cap or to remove the bearing cap from the crankcasing, it should be carried out according to this safety instruction.

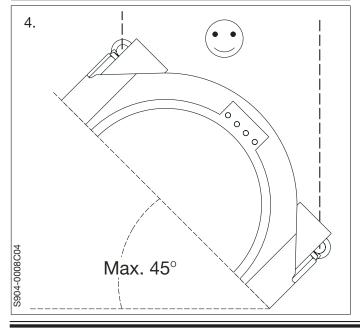
Inspect the lifting tools:
 Check that all necessary lifting tools are in proper condition.

Extension studs or eyebolts which show signs of overload or misuse must <u>NOT</u> be used. Lifting components which shows signs of bended threads or cracks must be discarded and new parts must be ordered.









- 2. When fitting the extension studs and eyebolts make sure to tighten to face contact.
 - Check with a 0.05 mm feeler gauge that there is no clearance between the lifting tools and the face.
- 3. The bearing cap must only be lifted in two lifting points at a time.
 - For each lifting point the lifting angle must not exceed 45° from vertical.
- 4. When lifting the crosshead bearing cap do not tilt the bearing cap more than 45° to horizontal.

- 5. The bearing cap must <u>NOT</u> be lifted in only one lifting point.
- 6. Do NOT pull in different directions so the weight of the bearing cap is only taken from one lifting point.

