

Date: December 05, 2017  
Subject: Big End Bearing Variant  
Engine type: M25, M25C

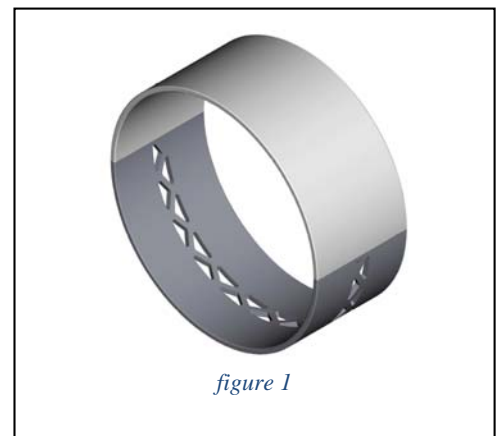
Caterpillar confidential: green

## New big end bearing variant

The former standard big end bearing for M25 and M25C engines (variant-03) has been replaced by a new bearing (variant-12). This bearing was originally developed for the M25E engine, but has become the standard bearing for serial production of M25C engines as well as spare part for all M25 engines now, too.

The big end bearing var.-12 is a bearing in grid technology. Compared to a bearing with the traditional round oil bores, a bearing in grid-technology (oil grooves in triangular form; see figure 1) has the following advantages:

1. Prevention of cam wear
2. Strongly reduced tendency for cavitation
3. No impact overload
4. Strongly reduced lubricating oil pressure fluctuations
5. Optimal lubricating oil flow rate for piston cooling
6. Optimal spreading of the load bearing capacity in the main load area
7. Increase of fatigue strength
8. Generally higher reliability



### **Notes:**

The variant of the big end bearing can be identified by the last two digits of the bearing marking (e.g. 25 282003 corresponds to variant – 03).

We recommend that you exchange the big end bearings on all cylinders of an engine at the same time in order to stay within the regular maintenance intervals. However, from a technical point of view, a mixed use of the bearing variants mentioned above is uncritical.

When changing a bearing to the new variant, no special measures need to be taken on the crank pin as long as it is still within the wear limits.

### **Note:**

**For bearings of variant -12, you will need a new installation tool. You cannot use the tool designed for the former variants featuring round oil bores.** Please contact your local MaK-Service representative for a special offer containing a full set of the new big end bearings and the proper installation tool. When ordering this kit, the bearings come with the new tool at no extra cost. Naturally, your local MaK-Service representative will also be happy to answer any other questions you may have.