

Caterpillar MAK M43C/M46DF Inline - Engine block cam shaft bearing support



Dear ERS Participants and surveyors,

Recently a claim was uploaded in ERS indicating a structural failure concerning MAK type M43C/M46DF inline, related to the engine block cam shaft bearing support.

In February 2023 the manufacturer issued a Service Information (no.: 0021M43) in which an occurrence of cracks in the engine block below the camshaft bearing is addressed.

If this problem is noticed early and has not progressed too far, it might be repairable. If not, the crack can have propagated too much, and the block will need to be renewed.

Probably owners of this make and type of engine are already aware of the problem through the Service Information, but if not, in relevant cases, please inform the owner and have the engine block cam shaft bearing support inspected.

We enclose the respective Service information bulletin for more detailed information.

We hope this is of assistance to you and will help in damage prevention.

If you have any questions, please don't hesitate to contact IVR.

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Service Information

Caterpillar Motoren GmbH & Co. KG product support information for medium-speed engines

Engine platform: M43/M46DF
Engine section: Engine block

Engine type: M43C/M46DF inline
Validity: until further notice

No. 0021M43 • Issue 1; February 13, 2023

Information for all engine owners / managers

Action: for immediate attention



Important Notice

M43C/M46DF Inline - Engine block cam shaft bearing support

Continuous monitoring of our engine type product health indicated a rare occurrence of cracks in the engine block below the camshaft bearing.

It was found that the presence of small irregularities in the cast skin, combined with high engine loads and frequent load changes, could possibly initiate crack propagation.

Depending on the overall condition of the engine block, such damage can be repaired. However, if a crack is not noticed or noticed too late, the engine may no longer be able to be operated.

Figure 1 shows a severe crack as seen from the side of the crankcase. Figure 2 shows the same crack seen from the side of the camshaft compartment, directly below the camshaft bearing. Depending on the classification society, such a crack can be repaired by metal stitching. Longer cracks are beyond repair and a new engine block is indicated.

Affected engine blocks were delivered in the period between 2007 and 2019 (to identify the specific engine delivery date please see the engine acceptance test record).

As a precautionary measure, we recommend checking the camshaft bearing by means of Magnaflux for small cracks in the casting skin or casting flaws. All

irregularities must be ground out and compressive stresses applied to the surface. After these measures, the engine block can be considered reliable for the life of the engine.

Please contact your local Caterpillar service representative for further information and for an offer.



figure 1



figure 2



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