

Date: April 19, 2017
Subject: Exhaust valve seat rings
Engine type: all variants of M43

Caterpillar confidential: green

Low temperature corrosion on exhaust valve seat rings

Low temperature corrosion is a well-known phenomenon on combustion engines operated on heavy fuel. "Cold" surfaces can be affected by condensation of sulfuric acid.

Some M43 series engines operated on heavy fuel were found with corroded exhaust valve seat rings at standard 15,000 hrs. maintenance intervals. The affected exhaust valve seat rings had to be exchanged earlier than expected.

We thoroughly investigated this issue and reviewed our design to develop exhaust valve seat rings that better resist sulfuric acid.

The new exhaust valve seat rings have a different shape that makes the seat ring more robust against thermal stress caused by frequent load change and are made of a material with higher resistance against corrosion caused by sulfuric acid condensation. These exhaust valve seat rings are available in different sizes up to 3 mm oversize as spare parts.

In case such exhaust valve seat rings are of interest for your M43 engines please get in contact with your MaK service representative for an offer.