

Date: June 30, 2014
Subject: Piston Crown Burn

Engine type: **M 43 / M 43 C / VM 43 / VM 43 C**
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Piston crown burn-off on engine type M 43

A part of the MaK M 43 engine field population has reported piston crown burning marks due to high-temperature corrosion. In certain cases, an early piston crown replacement was necessary.

The formation and extent of piston crown burn-off is influenced by several different parameters. Details were mentioned in earlier Service Information (07/04; 04/06, 0002M43) in this regard.

In close cooperation with the piston makers we developed new piston crowns that feature a higher resistance to high-temperature corrosion up to a certain level. Long-time field tests have been carried out with good results. The new piston crown type has an austenitic nickel-chromium-based super-alloy coated combustion chamber bowl and hardened piston ring grooves for low specific wear rates.

Please note that standard piston crowns for the serial engine production are not coated but also equipped with hardened piston ring grooves. Coated piston crowns for new engines are available as an option.

The new developed pistons and piston crowns are available as spare part now. In case of a piston crown exchange due to piston crown burn-off, special offers are available. The discount offered depends on the operating hours of the affected piston crown at the time of the exchange. Two categories are considered:

- Exchange necessary before or at the 15.000 h maintenance interval (performed up to 18.000 engine operating hours in total or up to 18.000 h since installation of the respective piston crown)
- Exchange necessary after the 15.000 h maintenance interval (performed between 18.000 and 25.000 engine operating hours in total or between 18.000 and 25.000 h since installation of the respective piston crown)

For other cases of piston crown exchange the special offer cannot be applied.

Please note, that when installing these new piston crowns on old piston skirts, the IMO marking on the skirt must be changed because this modification is considered a new piston variant. Therefore, an amendment to the technical file is needed to complete your documentation.

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Service Information

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In case of interest please contact your MaK service dealer for details and parts request in this regard and provide the following information:

- Ships name
- Engine No.
- Affected cylinder unit
- Current engine operation hours
- Date and engine operating hours of last 15,000 h maintenance on piston(s)
- Copy of last 15,000 h maintenance report

Please note that the availability of this new engine part might be limited due to a ramp-up in production and ordering.