You Get What You Pay For.

We strive to quality parts in critical for your business – as varying the differences in systems and staying profitable. Genuine MaK parts are designed and manufactured to exceed reliability as a complete system and may often be rebuilt for a second life, adding value to your investment. Design and manufacturing techniques are continually improved to ensure that using original MaK parts enhances engine performance, reliability, and reduces overall owning and operating costs – benefits you may not get from ‘grey market’ competitive parts. And, as you would expect, all Genuine MaK parts are backed by the Caterpillar Marine parts warranty.


Genuine MaK valves are the only valves engineered and manufactured to the specific standards and tolerances required to work optimally with MaK engines. Our exhaust valves are faced with one of the most sophisticated heat and corrosion resistant material available today. Powder welding to the valve, using a proprietary process designed by MaK engineers, ensures complete fusion and bonding to the parent material. Our engineering, quality materials, and strong process controls create wear resistant valves guaranteed to offer long service life with minimal risk of failure – claims that can’t be made by non-original parts manufacturers.

As an OEM engine builder with the goal of helping customers succeed, Caterpillar Marine manufactures its own exhaust valves to the highest quality standards, giving you the assurance of long component life. For more than 25 years, MaK exhaust valves have been manufactured at the Caterpillar-owned factory in Kiel, Germany, by highly qualified personnel utilizing the same quality manufacturing processes used for our engines.

The Power You Need.
The Cat® and MaK™ brands of Caterpillar Marine offer premier high- and medium-speed propulsion, auxiliary, and generator set solutions, as well as optional dual-fuel, diesel-electric, and hybrid-system configurations. With the launch of Caterpillar Propulsion, our comprehensive and evolving product line gives customers one source for the most extensive engine power range available, as well as complete propulsion systems, controllable pitch propellers, transmissions, and azimuth thrusters, and controls. Cat and MaK products and technologies have proven reliability and are built to last in all marine applications, demonstrating superior productivity and the lowest lifecycle cost.

Caterpillar Marine is committed to sustainability. This document is printed on PEFC certificated paper.

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The Power You Need.

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For more information or to find your local dealer, visit our website: www.cat.com/marine

Visit Cat Financial at: www.CatPowerFinance.com

Quick access to quality parts is critical for your business – often making all the difference in systems and staying profitable. Genuine MaK parts are designed and manufactured to function reliably as a complete system and may often be rebuilt for a second life, adding value to your investment. Design and manufacturing techniques are continually improved to ensure that using original MaK parts enhances engine performance, reliability, and reduces overall owning and operating costs – benefits you may not get from ‘grey market’ competitive parts. And, as you would expect, all Genuine MaK parts are backed by the Caterpillar Marine parts warranty.

Exhaust Valves
Genuine MaK Parts

Subject to change without notice
Genuine MaK Exhaust Valve
R.G. 10.06. 3 CS 3500
Original Cat

Powder Welding

Induction Hardening

Last Inspection

BUILT FOR IT.

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**Why Insist on Genuine MaK Parts?**

**More Profit**
Greater reliability and longevity maximizes your uptime and reduces Total Cost of Operation.

**Lower Operating Cost**
With longer life and longer Time Between Overhauls, MaK engines cost less to operate.

**Greater Safety**
Parts made by Caterpillar specifically for an MaK engine perform longer with fewer unplanned maintenance events or risk of failure.

**Availability**
All parts are dispatched within 24 hours, and our strategically-located distribution center efficiently delivers globally.

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**What’s the Risk?**

**Grey Market Exhaust Valve**
Continuous pressure to control costs can cause unwary customers to purchase low-priced, non-original parts that pose enormous risk to their engine.

Our own examinations and tests on ‘grey market’ exhaust valves have revealed major differences in material and quality when compared to the original MaK designed product.

- **Availability**
During our recent investigations into these grey market parts, we found internal stresses up to 20% higher than specified. Also hardness values that do not meet our MaK standards, incomplete hardening layers, missing undercut, and weaker bonding of facing material.
- **Transverse microsections through the hard facing**
Those defects translate into increased stress, early failure, and reduced life of the components. While the initial upfront cost for non-MaK parts may be attractive, the risks of failure, damage, and downtime associated with them demonstrate that they are not a viable or economical alternative.

Actual residual stress distribution, measured tangentially on the valve seat, shows tensile stresses much higher than allowed for original MaK valves – in some samples, 20% more than the maximum allowed.

- **Grey Market Exhaust Valve**

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**Longer Life and Longer TBO, Lower Operating Cost.**

Customers using MaK manufactured exhaust valves have benefitted from their exceptional service life. Due to the high wear resistance of the facing material, MaK exhaust valves may be re-used several times. Through the support of our service network, customers have reassembled original MaK exhaust valves whose condition allowed further operation after 30,000 hours, especially when using HFO.

MaK aims to provide our customers with the longest life valves available in the industry and that the lowest operating costs. Less will be spent on replacement valves, and less on labor for the removal of cylinder heads and the grinding of faces and seats. Equally important, less downtime and limited risk of off-hire.

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**Faster. Less Expensive. Damage-Free Parts.**

All MaK spare parts originate from the Caterpillar factory in Kiel, and are delivered through our distribution center located near the major international port of Hamburg. Within close proximity to both the international airport and the port infrastructure in Hamburg, the logistics center makes parts available quickly, with all parts dispatched within 24 hours.

Parts are optimally packed to ensure protection from damage. Generally, we use the VCI method that offers corrosion protection we optimized through our own testing. We maintain close contact with logistic partners worldwide who specialize in sea, air, and transport so that each shipment is collected and dispatched as efficiently as possible.