



## WÄRTSILÄ 46F PERFORMANCE UPGRADE – OPTIMISE YOUR OPEX

Optimising the combustion process in an engine offers a quick and cost-effective way to reduce vessel emissions and operating costs. The Wärtsilä 46F Performance Upgrade is a comprehensive, tailored package for Wärtsilä 46F engines equipped with TPL76 turbochargers. The upgrade boosts engine performance and fuel economy by replacing the existing turbocharger cartridge with the latest C8X technology. The upgrade also increases equipment availability by extending the exchange interval of the turbocharger's rotating components.

### **Extend the recommended exchange interval by 50%**

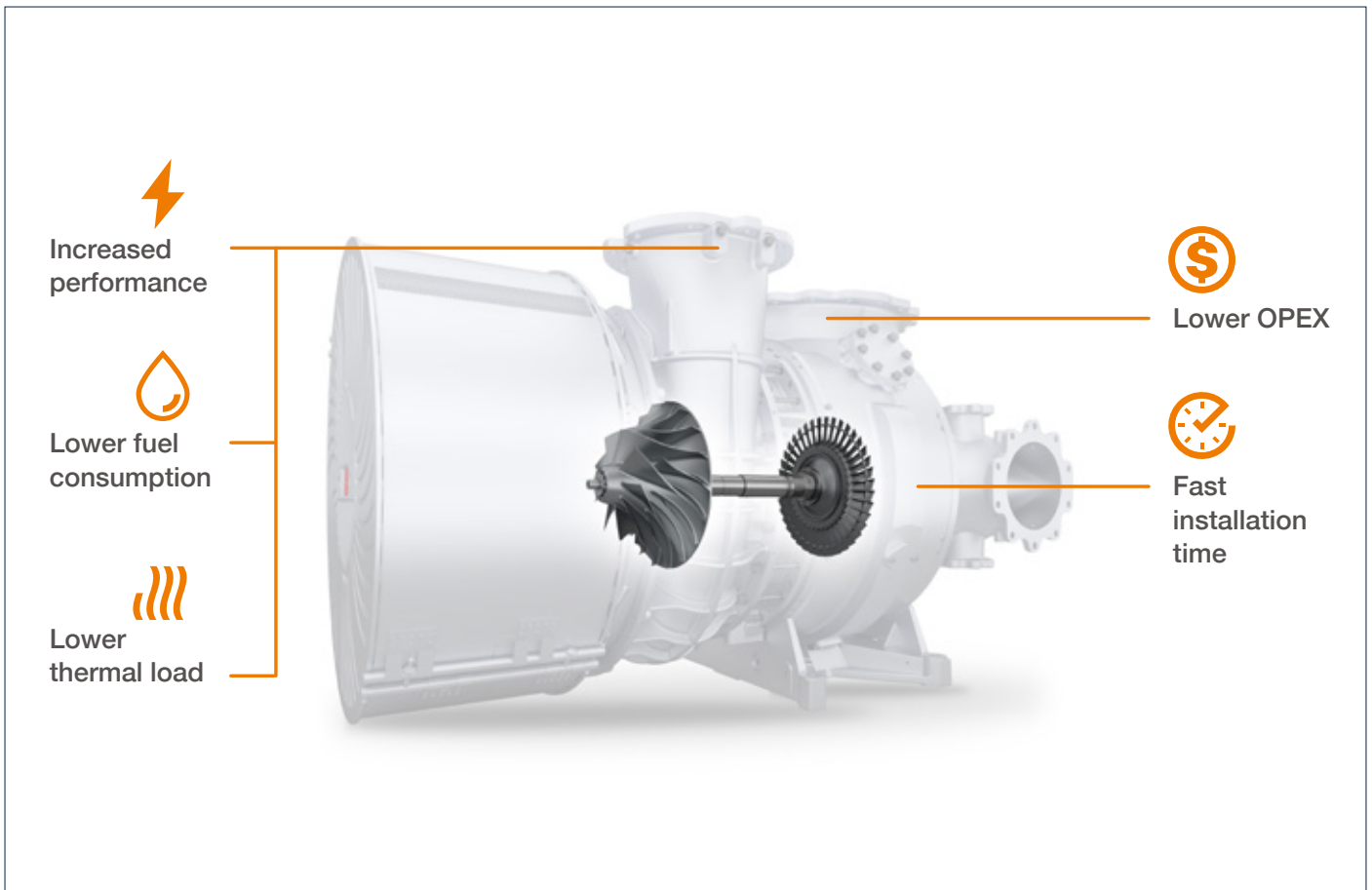
The Wärtsilä 46F Performance Upgrade boosts engine performance by utilising the latest turbocharging technology, the C8X turbocharger cartridge, to optimise the engine's combustion process.

The technology has demonstrated its ability to achieve a clear improvement in turbocharger efficiency and overall engine fuel economy in a series of comprehensive field tests.

The upgrade also extends the exchange interval of the turbocharger's rotating components from 50,000 to 75,000 running hours. For the best possible return on investment the optimal time to perform the upgrade is at 48,000–50,000 running hours, when the turbocharger is due for a major overhaul. Implementing the upgrade takes just one day per turbocharger.

### **KEY BENEFITS**

- Optimise OPEX
- Extend exchange interval of turbocharger rotating components by 50%
- Improve turbocharger efficiency by 3%
- Reduce fuel consumption and emissions
- Lower thermal load



### Lower thermal load due to optimised combustion

The upgrade improves turbocharger efficiency by 3%, leading to improved engine performance. After the upgrade the exhaust temperature before the turbo and after the cylinders is reduced, extending the lifetime of the turbocharger and engine components.

The upgrade can reduce the fuel consumption of a W8L46F engine by approximately 1–1.5g/kWh, which translates into a reduction in CO2 emissions of approximately 147 tons per year.

### Scope of supply

- Turbocharger modification including all necessary parts and components
- Commissioning including performance testing for EIAPP certificate update purposes

### Why choose Wärtsilä?

Wärtsilä is a leading OEM supplier to the marine industry with a global service and support network. Wärtsilä supports its customers throughout the entire lifecycle of the supplied equipment, and we strive to maximise the useable life of our customers' equipment investments.

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