

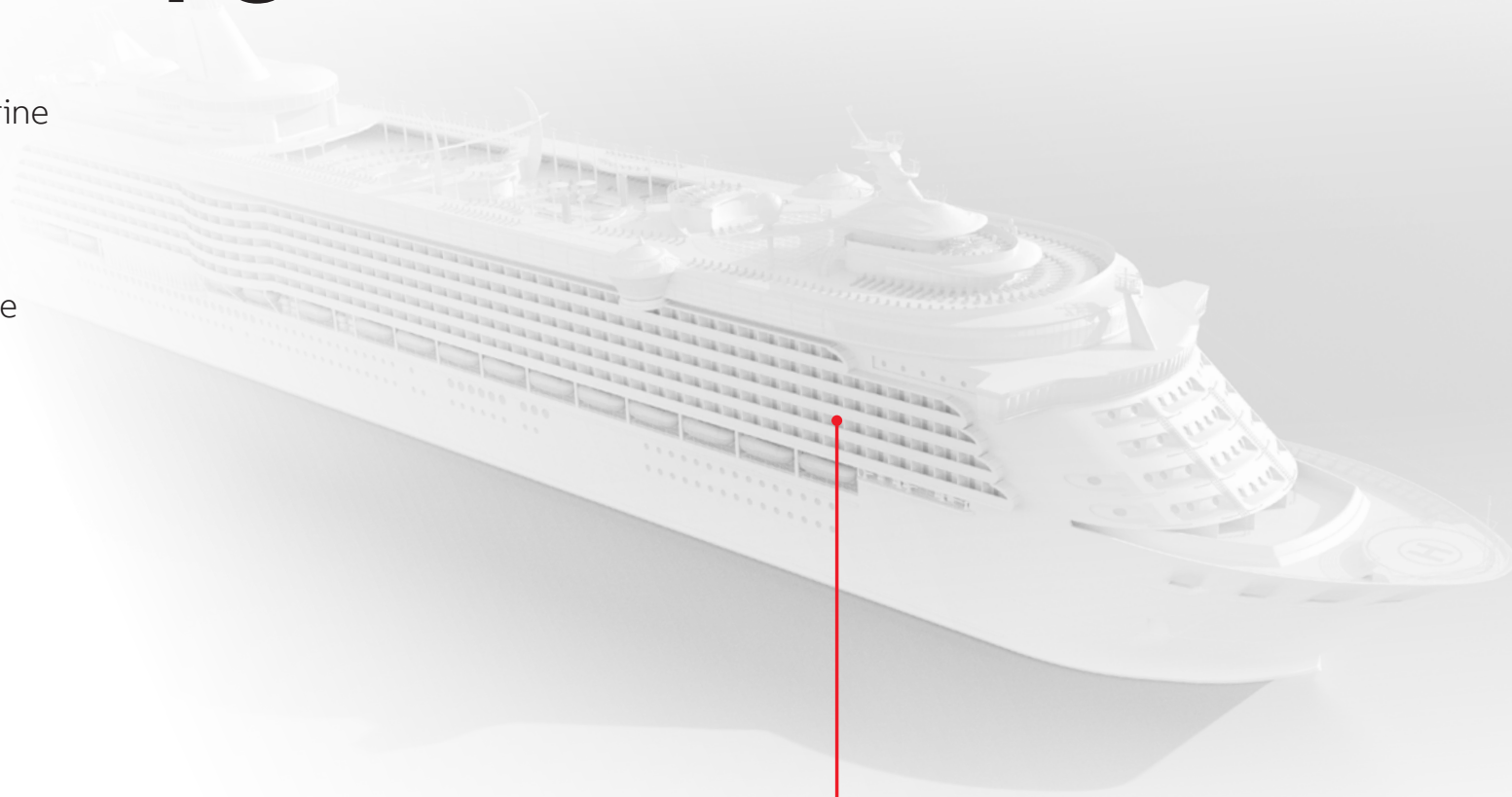
# Performance Upgrade

## Upgrade solution for TPL73-A

W38, W46, W50 & ZA40 Engines – Marine

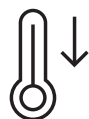
“This 100% drop-in solution, when combined with engine side upgrades, makes customers’ turbochargers more competitive with lower operational costs and increased performance.”

**Peter Cellbrot,**  
Product Manager Upgrades, ABB.



**Fuel savings**

Up to  
**3%**



**Lower exhaust temperature**

Up to **50°C**  
reduction



**Solution drop-in**



**Maintenance cost**

Up to  
**30%**  
reduced



**Rotating component exchange interval**

Extended by  
**50%**

## Turbocharger Upgrade Solution

### Upgrade to the TPL73-A4X

#### The solution in a nutshell

The TPL turbocharger component upgrade (developed in collaboration with Wärtsilä) increases the performance of both turbocharger and engine alike. This simple, drop-in solution replaces internal components only, meaning no changes to external connections and interfaces and the upgrade can be performed much quicker, getting you back on track in under 12 hours.

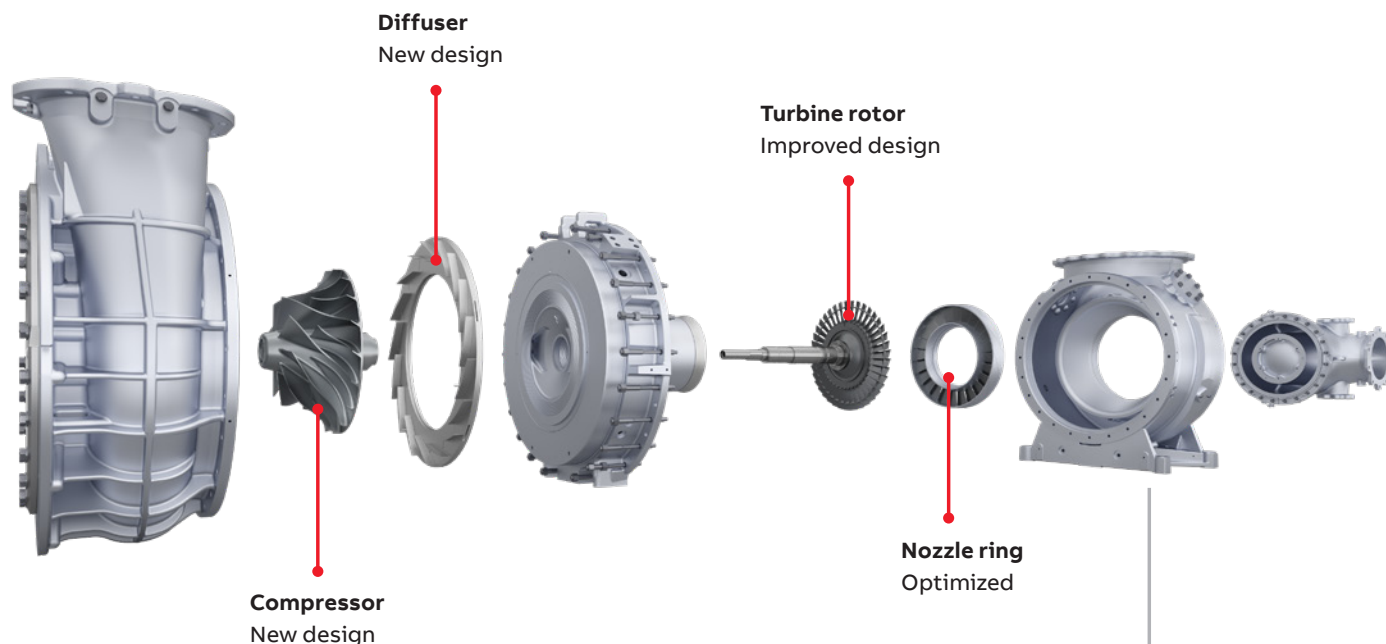
Because the upgrade consists of improvements to several key components, such as new compressor wheel and diffuser designs, improved turbine and nozzle ring, to name a few, you can enjoy a significant increase in fuel savings and a reduction in exhaust gas temperatures. In addition, due to the extended interval for replacement of rotating components, you can benefit from lower maintenance costs, ensuring you stay ahead of your competition. That's why the TPL component upgrade is your formula for success.

#### Application

- For turbocharger type TPL73-A
- Wärtsilä engines W38, W46, W50 and ZA40 fitted with TPL73-A turbochargers
- All fuel types: HFO, MDO, Gas

[abb.com/turbocharging](http://abb.com/turbocharging)

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#### Case study

Engine	W12V46C with TPL73-A
Rated engine power	12,840 kW
Major engine load point	85%
Yearly running hours	5,000 h
Fuel savings	3.5g/kWh <sup>1</sup>
<b>Annual added value</b>	
Exhaust gas temperature	0-50°C <sup>2</sup>
Fuel savings (@ 440\$/t HFO)	75,291 \$/year

<sup>1</sup> In combination with an engine upgrade

<sup>2</sup> Reduction dependent on original design version

