



POWERED BY



Turbocharger Anomaly Detection and Predictive Maintenance-as-a- Service Digital Platform

Leverage the power of turbocharger data to generate business value

TruCare™

Turbocharger Anomaly Detection and Predictive Maintenance-as-a-Service (PdMaaS) Digital Platform

Built based on Tru-Marine's 45+ years of domain knowledge and expertise in turbocharger Maintenance, Repairs, and Overhauls (MRO), TruCare™ is a strategic partnership between Tru-Marine and German turbocharger maker Kompressorenbau Bannewitz (KBB)

- Suitable for all turbochargers onboard all ocean-going vessels
- Fits onto running engines without mandatory modifications
- Transforms the technical management of ocean-going vessels via an intelligent, centralized predictive monitoring system
- Progresses from reactive maintenance to set new standards for the predictive maintenance of turbochargers



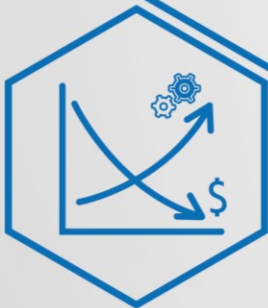
REAL-TIME TURBOCHARGER MONITORING

Review the health conditions of all turbochargers across your entire fleet through one dashboard



DETECT AND PREDICT THREATS

Discover anomalies quickly across your turbochargers and foresee threats that may arise in the future



REAL PRODUCTIVITY GAINS

Save on MRO costs and downtime while optimizing your spare part inventory and overall onboard crew performance



CONVENIENT

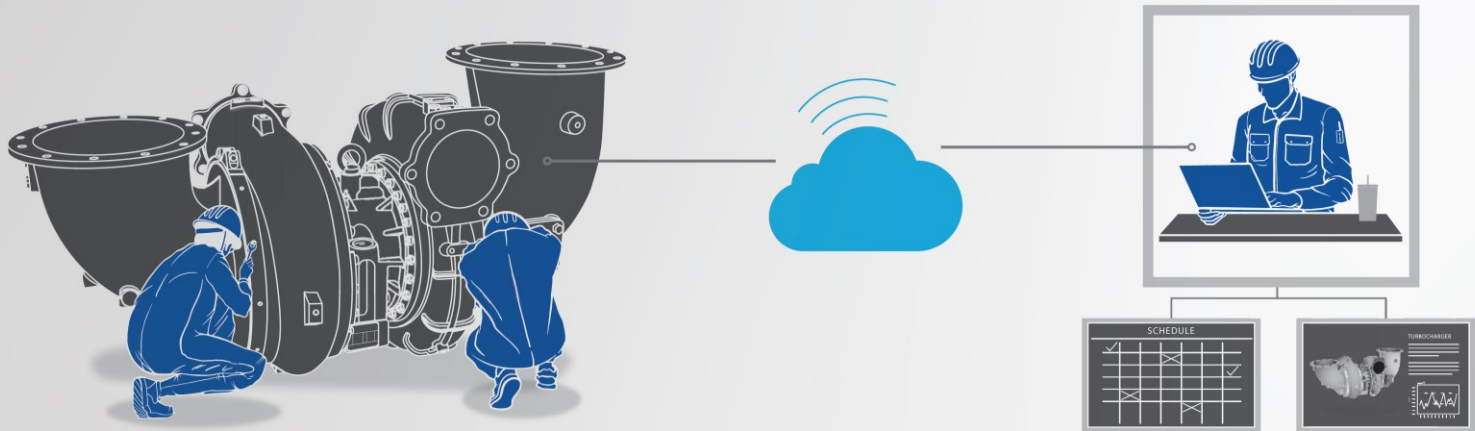


PROACTIVE



COMPREHENSIVE

How TruCare™ Works



IoT technologies are used for turbocharger performance monitoring and technical consultancy.

Detection of a fault likelihood and recommendation of service are based on the actual operating conditions onboard, or whenever the need arises.

- Transmits key operational parameters from ship-to-shore into a command centre for real-time data analysis
- Establishes correlations between turbocharger performance and engine parameters to detect anomalies and complex indications for breakdowns
- Uses machine learning algorithms and failure models to monitor turbocharger performance, predict failures and recommend maintenance windows
- Pre-empt potential operating issues before there is a crisis

Unparalleled Benefits

TruCare™ predicts the Optimal Time for Refurbishment/Overhaul of components. Service intervals can be designed more flexibly based on the actual conditions without increasing the probability of a failure.

The PdMaaS digital platform addresses the commonly occurring, premature turbocharger failures and associated high costs of emergency repairs, vessel downtime, off-hires and delayed port calls.



**IMPROVED
TURBOCHARGER
LIFESPAN**



**REDUCED
SUDDEN
DOWNTIME**



**REDUCED
MAINTENANCE
COSTS**



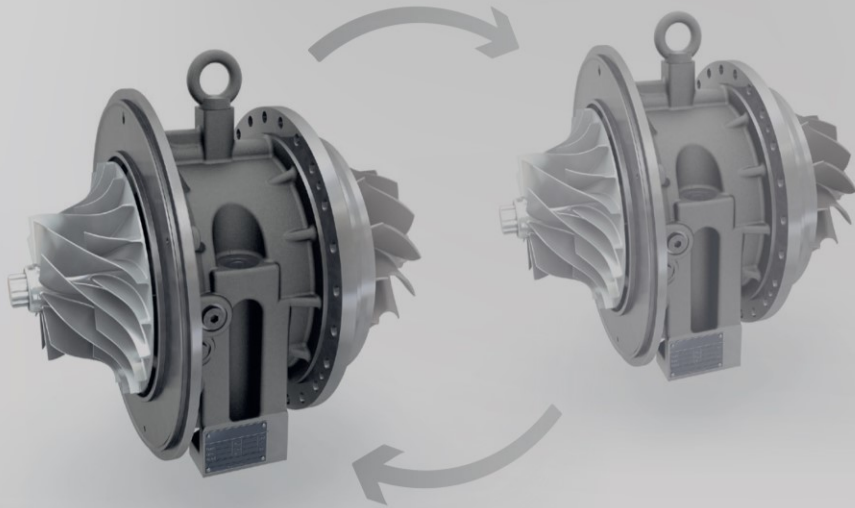
**REDUCED
SPARE PART
INVENTORY**



**IMPROVED
CREW
PERFORMANCE**

Backed by KBB Knowledge-2-Swap (K2S)

Backed by K2S, TruCare™ aims to meaningfully contribute to Environment, Social, Governance goals, especially in support of sustainability and circularity.



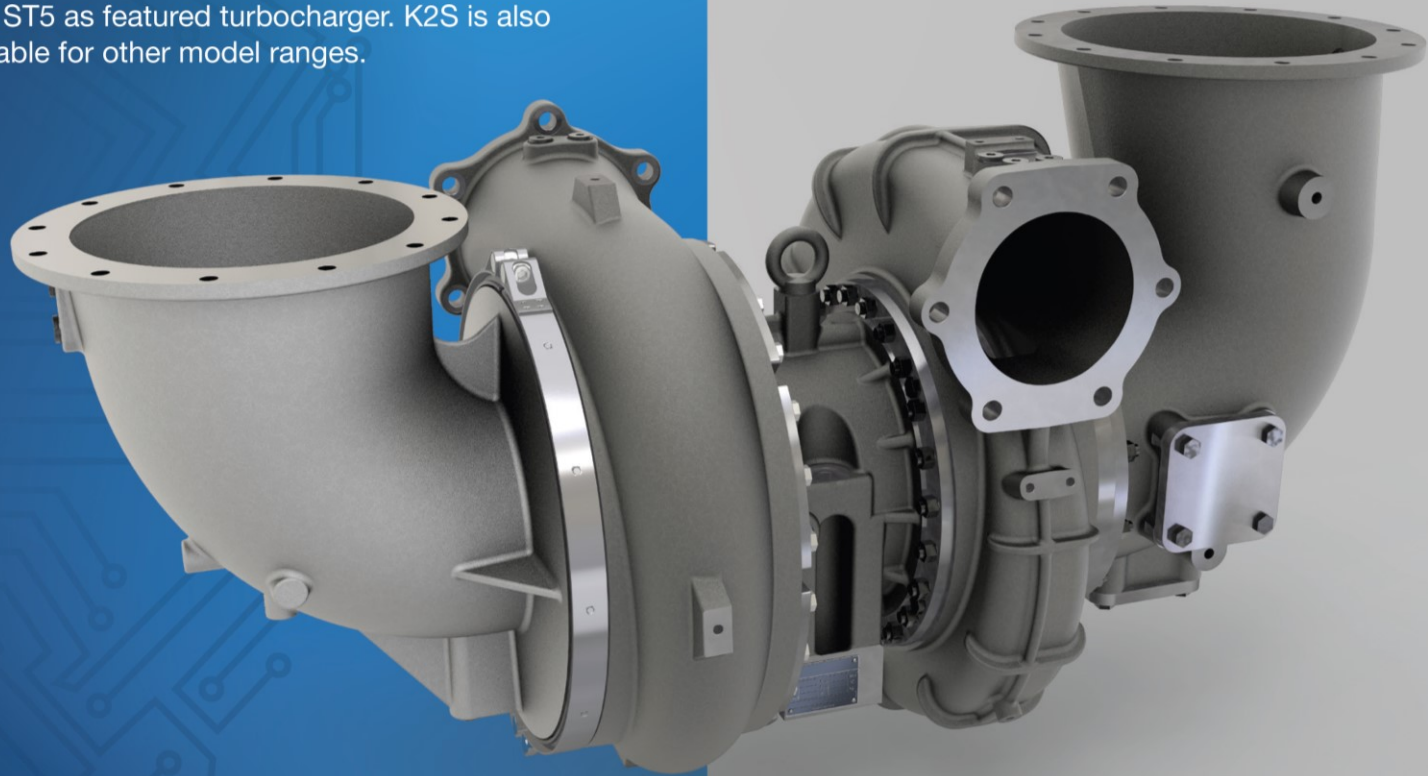
The K2S programme is currently available for the most widely used specifications of KBB's HPR as well as ST27 and ST27-EP series of turbochargers.

Designed as a plug-and-play solution, K2S ensures the rapid availability of genuine parts, allowing ship owners and operators to manage the risk of both planned and emergency maintenance.

The right parts will be made available at the right time in optimizing scheduled maintenance and emergency response, enabling good value repairs and competitive total cost of ownership, as well as ensuring that units in service are of the newest standard.

**Tru-Marine is KBB
authorized for certified
service and genuine parts.**

KBB ST5 as featured turbocharger. K2S is also
available for other model ranges.





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Harness the power of turbocharger predictive maintenance with TruCare™



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