

Reason

It is observed in some rare cases that turbochargers in the field are not adequately cleaned. In order to ensure a reliable and safe operation of the turbocharger the installation of a wet and dry cleaning device is necessary. Especially when the engine is operated with HFO, wet and dry cleaning is mandatory.



Figure 1: Heavily contaminated nozzle ring vane

Action Code:

At first opportunity

Turbine Cleaning

PrimeServ Customer Information
No. 367 / January 2017

Concerns

MAN Diesel & Turbo SE
Turbochargers - all radial TC types
(NR- and TCR-series)

Filing Advice

Cleaning device
Cleaning procedure



Description

A high contamination level with deposits will cause an offset to the normal gas-flow parameters. This can cause on the one hand an increase of the temperature level before turbine or also surging, and on the other hand a significant increase of unfavorable excitation orders what may advance a severe damage of the turbocharger by causing fatigue on the turbine rotor vanes.

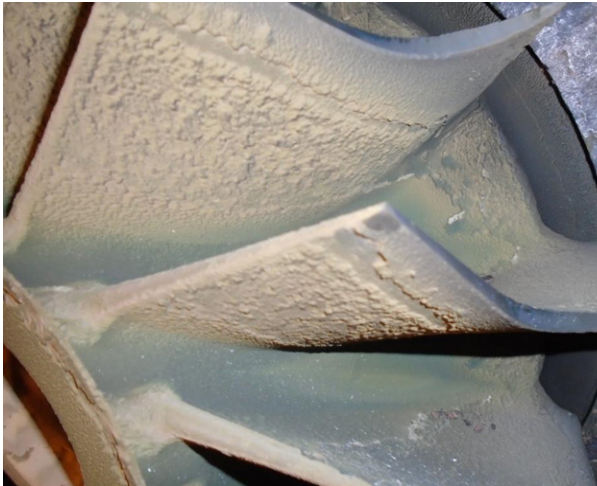


Figure 2: Inhomogenous fouling on turbine vanes

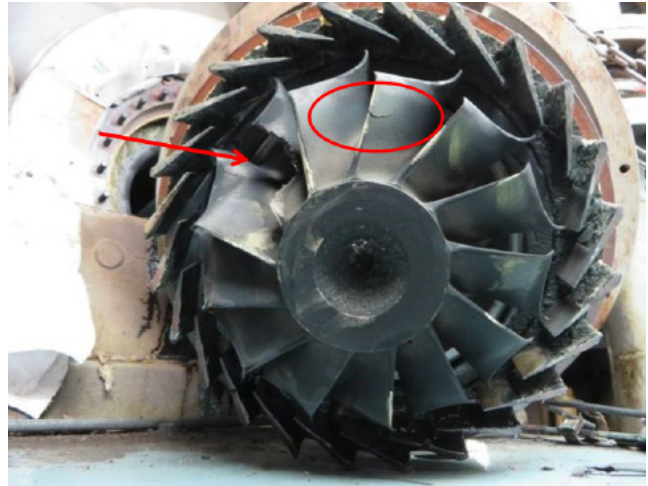


Figure 3: Cracks of turbine outlet vane

The cleaning procedure must be carried out in accordance to the engine or turbocharger operating manual, further it's mandatory to check adjustments of the cleaning system as air / water pressures, pipe connections and installation.

For the following engine types the cleaning equipment can be ordered via MAN DIESEL & TURBO Holeby (primeserv-hol@mandieselturbo.com) for propulsion application and via MAN DIESEL & TURBO Frederikshavn (primeserv-frh@mandieselturbo.com) for genset application:

- 16/24
- 21/31
- 23/30
- 28/32
- 27/38

MAN DIESEL & TURBO Augsburg (primeserv-aug@mandieselturbo.com) can offer the cleaning equipment for the following engine types

- 32/40
- 32/44

All questions related to the cleaning procedure and installation will be answered by the responsible office as well, or at primeserv-tc-technical@mandieselturbo.com.

Contact

Should you have any questions, please do not hesitate to contact our Technical Service Department for further assistance:

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Handwritten signature of Alexander Schäfer in blue ink, preceded by the "i.V." (in Auftrag) notation.

Alexander Schäfer
Vice President

PrimeServ Turbocharger

Handwritten signature of Klaus-Peter Ebel in blue ink, preceded by the "i.V." (in Auftrag) notation.

Klaus-Peter Ebel
Head of Technical Consulting

PrimeServ Turbocharger

Please forward this information to your technical operating personnel and remember to inform us of the current operating hours of your MAN Diesel & Turbo engines.