Customer Information

Nozzle ring cracks on NA and TCA type turbochargers

Effectivity
All NA and TCA type turbochargers with casted nozzle rings

Reason
It is not always necessary to exchange the nozzle ring if cracks are found. This customer information provides a guideline about which cracks are acceptable, and in which cases the nozzle ring has to be replaced.

Compliance
Recommended

Description
Service experience often shows cracks in nozzle rings. These cracks result from thermal stress. It is not always necessary to exchange the nozzle ring if cracks are found.

The following rules apply in order to determine whether the nozzle ring has to be exchanged:

- **Inner Rim**
  - One crack between two slots or boreholes is acceptable.
  - An additional crack in the slot or borehole is acceptable.
  - Two or more cracks with no slot or borehole in between are not acceptable.
  - Cracks must not touch a nozzle ring vane.

![Diagram of nozzle ring with acceptable and unacceptable cracks]
Outer rim

One crack between two nozzle ring vanes is acceptable.
Cracks must not touch a nozzle ring vane.

Nozzle ring vanes

Cracks in the nozzle ring vanes are not acceptable.
Broken off pieces are not acceptable.

If one of the above rules is not met, the nozzle ring has to be replaced.

Material / Spares

Turbine nozzle ring 513.001

Contact

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

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Please forward this information to your technical operating personnel!