

Machinery damaged through improper maintenance technique

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During an audit on an offshore vessel it was observed that the fuel oil purifier failed to self-discharge.

IOGP Life Saving Rules:



Bypassing safety controls

What happened?

Further investigation revealed that purifier bowl components had been swapped with parts from the lube oil purifier, with different serial numbers. After reinstalling genuine parts, the purifier showed excessive current and high vibration. Inspection confirmed mechanical damage to the bowl caused by improper dismantling.



Purifier nameplate, serial number ending ----148



Bowl component parts, s/n ending ---147



Purifier body, s/n ending --148

Why did it happen?

- The procedures provided by the Original Equipment Manufacturer (OEM) were not followed.
 - Special tools specified by the OEM were not used, causing mechanical damage to critical parts. The purifier bowl and related components were dismantled without using special tools specified in the OEM manual.
- Compatibility of parts was not verified before installation. Parts were interchanged that should not have been interchanged. Parts with serial number linkage (bowl, sliding piston, cover etc.) were not freely interchangeable.
- Existing planned maintenance intervals were not followed.
- Maintenance documentation and traceability was found to be inadequate.

What do we learn?

- Always follow the OEM manual and use specified tools for disassembly, assembly and maintenance.
- Carefully and thoroughly verify that you have the correct, compatible and

genuine parts – in this case, using parts from another purifier may have led to excessive vibration/high current which may have damaged the whole machine.

- Communication and documentation: Keep detailed records with supporting documents of repairs and overhauls, with, where applicable, specific running hours and the condition of the unit.
- Use Stop Work Authority!

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