MSF: Engine damage after routine maintenance

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The Marine Safety Forum (MSF) has published Safety Alert 21-09 relating to engine damage following routine maintenance.

What happened?

On an offshore platform supply vessel it became necessary to stop one of the engines due to a high temperature alarm.

The vessel was alongside a platform in DP mode at the time.

Cargo operations were stopped, and the vessel moved to a safe location before the engine was stopped.

What was the cause?

Upon inspection, damage was found in a valve gear assembly of a cylinder.

Investigation showed that 86 running hours before the incident, valve adjustments had been carried out.

When removing the cylinder cover, small metal particles and partial destruction of the exhaust valve tappet tip was found.

The evidence available indicated that the locking nut of the adjusting screw from the exhaust rocker arm (that regulates the clearance of the exhaust valve) had become loose.

The most likely cause of this is that when reassembling, the locking nut had not been tightened as per the manufacturer’s requirements.

Actions / lessons learned

- Ensure that maintenance is conducted according to the manufacturer’s requirements.
- After maintenance always carefully (double) check that all parts are properly (re-)assembled.
- Always check torque using a torque wrench as per manufacturer's manual.

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