

Action code: **WHEN CONVENIENT**

Increased Protection of Turbochargers against Overspeed

SL2015-599/PEKI
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Concerns

Owners and operators of MAN B&W two-stroke marine diesel engines. Type: MC/MC-C and ME/ME-C/ME-B engines equipped with EGB, TCCO, TCG or VT and power management system

Summary

Shutdown recommended instead of slowdown when TC overspeeding is detected.

Dear Sirs

It has come to our attention that MAN B&W marine two-stroke engines equipped with exhaust gas bypass (EGB), turbocharger cut-out (TCCO), variable turbocharger (VT), hybrid turbocharger (TCG), and interface to the vessel's power management system (PMS) are subject to increased risk of TC overspeed.

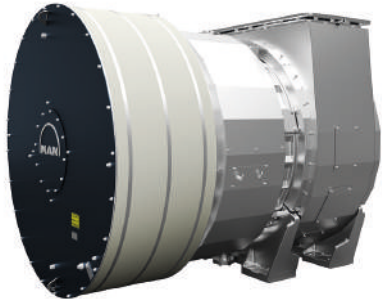
For vessels equipped with this specific combination of technologies, we recommend upgrading the safety system's action when overspeeding of the TC is detected.

Table 1 on page 2 provides an overview of the plant configurations on which shutdown should be implemented if the turbocharger overspeeds.

Yours faithfully


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Previously, our recommendation was to initiate slowdown if TC overspeeding was detected on the engine plant configurations described in Table 1. Now, we recommend a shutdown instead.

This change should be implemented in the main engine safety system for these plants.

The reason why these plants are at a higher risk of suffering damage to the TC is that certain configurations enforces a delay before the main engine fuel index is reduced, as opposed to a shutdown which is effective instantly.

This delay is enforced to allow the PMS to distribute the load from the main engine driven generators to other sources. This delay can lead to overspeeding of the turbo-

charger, as the gas amount to the TC remains unchanged even after a high rpm level is detected by the safety system.

It is important to note that that the modification does not concern personal safety, as it is solely a matter of protecting the turbocharger against overspeeding.

Owners of the engine plants concerned can contact our Operation Department for a detailed specification of the safety system functionality.

Questions or comments regarding this SL should be directed to our Operation Department LEO (e-mail: leo@mandieselturbo.com).

Table 1: Engine plant configurations affected

	<u>Not installed:</u> power management system handshake	<u>Engine equipped with:</u> WHR or shaft generator with power management system handshake
<u>Not installed:</u> exhaust gas recirculation, variable turbocharger, exhaust gas bypass, turbocharger cut-out, power turbine (turbo generator) or hybrid turbocharger	None	None
<u>Engine equipped with:</u> exhaust gas bypass, variable turbocharger, power turbine (turbo generator) or hybrid turbocharger	Turbocharger overspeed slowdown	Turbocharger overspeed shutdown
<u>Engine equipped with:</u> exhaust gas recirculation	Turbocharger overspeed shutdown	Turbocharger overspeed shutdown
<u>Engine equipped with:</u> turbocharger cut-out	Turbocharger overspeed slowdown	Turbocharger overspeed shutdown