



Action code: AT FIRST OPPORTUNITY

General Information
Safety standard

SL2015-607/KJER
December 2015

Concerns

Owners and operators of MAN B&W
two-stroke diesel engines
Type: All MAN B&W two-stroke engines

Summary

This service letter provides general
information on:

- 1. The development of two-stroke engine
safety and the importance of maintaining
the highest safety standard.
2. The importance of adhering to instruc
tion books, operation manuals an service
letters issued by MAN Diesel & Turbo.
3. Behaviour that potentially may result in
casualties and engine damage resulting
in off-hire.

Reference is made to service letters
SL09-512/CAA, SL2013-569/HWC
and SL08-498/AAB.



Precautions against crankcase explosions

Dear Sirs

Safety regarding construction and operation of MAN B&W diesel
engines is of key importance to MAN Diesel & Turbo. Our goal is to
have a safe engine and a safe workplace around the engine for the
crew.

The purpose of this service letter is to draw your attention to the
proper execution of daily routines, maintenance and the development
of two-stroke engine safety as well as the importance of keeping
safety components to the highest safety standard, e.g.

- 1. Crankcase explosion relief valves
2. Oil mist detector

MAN Diesel & Turbo strongly recommends all owners and operators
of MAN B&W two-stroke diesel engines to conduct an inspection of
the above-mentioned systems and components for all engine plants
under their responsibility to ensure the highest safety standard.

- 3. Bearing wear monitoring system
4. Shaftline earthing device

MAN Diesel & Turbo also strongly recommends inspection of the
systems mentioned in item 3 and 4, if installed. If not installed we re-
commend that your engine is brought to the highest safety standard.

Yours faithfully

Handwritten signatures of Mikael C. Jensen and Per Pallisgård

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Introduction

This service letter provides general information on:

1. The development of two-stroke engines i.e., safety design development of crankcase relief valves, oil mist detectors, bearing wear monitoring systems, shaftline earthing devices and the importance of maintaining the highest safety standard of these.
2. The importance of executing daily routines as well as maintenance and repair work in accordance with the instructions given in the instruction book, the operation manual for the engine as well as service letters issued by MDT.
3. Behaviour that may potentially result in both casualties and engine damage resulting in off-hire.

Crankcase explosion relief valves

The crankcase relief valves have undergone a design development improving the safety in the period 1990 to 2009. The latest generation of crankcase explosion relief valves provides improved protection of the crew and limits damage in case of a crankcase explosion as described in a previously issued service letter SL09-512/CAA.

As of 2009, five types of crankcase explosion relief valves have been type approved and meet the specifications in IACS UR M66, Type Testing Procedure for Crankcase Explosion Relief Valves. The makers and types of the approved relief valves are:

Hoerbiger Ventilwerke, type EVS
Mt. Halla Control Valves, type M20 and M30
Kwang San, type KSRV
Hyunwoo SMT, type HWG
Unitech, Type ERV

MDT strongly recommends to use only the above mentioned type approved relief valves.

Oil mist detector

The oil mist detector (OMD) is an important tool for preventing crankcase explosions. MDT recommends connecting the OMD to the engine control system enabling the engine control system to issue a slowdown request/load reduction if the oil mist concentration in the crankcase becomes too high.

Additionally, checking the oil mist detector and the oil mist alarm should be included in the regular maintenance routine as requested in the manuals and service letter SL09-512/CAA.

Bearing wear monitoring system

It is recommended to have a bearing wear monitoring (BWM) system installed as described in a previously

issued service letter, SL2013-569/HWC. The latest BWM specification issued by MDT enables an early detection of a sudden and rapidly developing bearing damage by lowering the response time of the BWM system. Besides, it is recommended to connect the BWM system to the engine safety system and the automatic slowdown/load reduction function.

Shaftline earthing device

In order to avoid spark erosion and higher main bearing wear rates, which may potentially result in damage of the crank train bearings it is recommended to have a shaftline earthing device and monitoring system installed. Service letter SL08-498/AAB encompasses the latest recommendations with respect to installation and maintenance of a shaftline earthing device and deals with signs of spark erosion and early detection.

MAN Diesel & Turbo strongly recommends all owners and operators of MAN B&W two-stroke diesel engines to conduct an inspection of the above mentioned systems and components for all engine plants under their responsibility to ensure the highest safety standard.

Daily routines and maintenance

Regular inspections are required to ensure that the cause of potential problems are detected as early as possible and promptly solved. It is vital that daily routines as well as maintenance are executed in accordance with the instructions given in the instruction books and operation manual for the engine as well as the service letters issued by MDT.

Over the years MDT has come across examples of behaviour that may potentially result in e.g. crankcase explosions. It should with respect to this matter be emphasized that disabling part of the engine safety system such as the OMD, ignoring alarms or maintenance procedures have previously resulted in both casualties and engine damage resulting in off-hire. The improper use of unauthorised spare parts may also be the cause of casualty or engine damage.

If required MAN Diesel & Turbo will provide you with more details or a quotation for components; please do not hesitate to contact: PrimeServ-cph@mandieselturbo.com

Questions regarding this service letter can be forwarded to: lee3@mandieselturbo.com