



Service Letter

SL06-464/JBR  
April 2006

**Graviner Mk6 Oil Mist Detection System  
Precautionary Exchange of Sensor Sample Probes**

Action Code: IMMEDIATELY

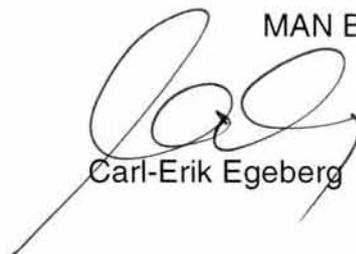
Dear Sirs

We draw your attention to the enclosed information from Kidde Fire Protection regarding the required exchange of Oil Mist Detector sensor sample probes.

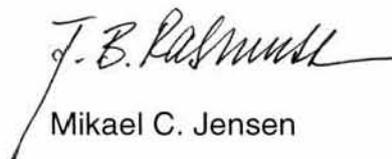
Questions or comments regarding this SL should be directed to our Dept. 2550.

Yours faithfully

MAN B&W Diesel A/S



Carl-Erik Egeberg



Mikael C. Jensen

Encl.



To whom it may concern

**Graviner Mk6 Oil Mist Detection System**

**ACTION REQUIRED**

**Precautionary Exchange of Sensor Sample Probes**

Dear Sirs,

This letter is to advise you of recent findings with regard to the operational status of the Kidde Graviner Mk6 Oil Mist Detection system and of Kidde Fire Protection's decision to issue a precautionary instruction that the sensor sample probes on all existing in service Mk6 OMDs be exchanged.

It has been established that in some engine conditions the sensor sample probes can become occluded by oil splash – which means that they then do not effectively sample the crankcase atmosphere. For this population there is an increased risk that OMD sensors may not report a hazardous condition.

This issue has been actively investigated by an OMD TASK Force made up of representatives of A.P.Moller / Maersk, MAN B&W, Wärtsilä, Lloyds Register, ABS, DNV and, of course, Kidde Fire Protection.

Having identified a potential failure mechanism which affects the Mk6 OMD, Kidde Fire Protection has introduced a change to the sensor sampling probe that fully obviates this issue. Laboratory and on-engine tests have confirmed that the revised sensor sample probe eliminates any propensity for oil occlusion due to oil splash.

Kidde Fire Protection has prepared a package which includes full instructions, the replacement sensor sample probe and the loose tools to enable expeditious exchange by the operators. These packages will be distributed free-of-charge immediately to all affected vessels by the most appropriate means once they have been identified.

This action is subject to Classification Societies' formal approval\*, but the change has been endorsed in principle by the China Classification Society, Lloyds Register, Germanischer Lloyds, Det Norske Veritas and the American Bureau of Shipping.

## **NOTE**

An "occluded" probe will always report a ZERO signal at the panel. However, it is not abnormal or unusual that a Mk6 OMD sensor returns a ZERO signal when it is installed on an engine running under sustained load. The output from each sensor has an internal offset such that the sensor NEVER returns a reading as a result of background drift or temperature effects. At high engine temperatures this offset gets bigger, and normally the intrinsic oil mist wash out in the crankcase reduces the normal oil mist background level. What this means is that unless the oil mist background in the crankcase exceeds this "offset" (typically about 0.04mg/l) the panel returns a ZERO signal. Nevertheless, the unit is fully functional as an oil mist detector safety device.

I trust that this clarifies the current position, but if you have any further queries or concerns then please contact Mr Paul Darnell in our technical support department:

Telephone: +44 (0) 1 844 265003  
Fax: +44 (0) 1 844 265156  
E-mail: [paul.darnell@kiddeuk.co.uk](mailto:paul.darnell@kiddeuk.co.uk)

Yours truly,



Alec Nightingale  
Managing Director

\* The Mk 6 OMD system has been previously type approved by the following classification societies:

American Bureau of Shipping  
Bureau Veritas  
China Classification Society  
Det Norske Veritas  
Germanischer Lloyd  
Korean Register of Shipping  
Lloyd's Register  
Nippon Kaiji Kyokai  
Registro Italiano Navale  
Russian Register of Shipping

Graviner Mk 6 Oil Mist Detector - Sample Probe Exchange Return Sheet

<b>Vessel Name:</b>	<input type="text"/>	<b>Vessel Owner</b>	<input type="text"/>
<b>Class Society:</b>	<input type="text"/>	<b>IMO Number:</b>	<input type="text"/>
<b>N° of Detectors Modified:</b>	<input type="text"/>	<b>N° of spare detectors modified:</b>	<input type="text"/>

**NOTES**

**COMPLETED (✓)**

The relevant Class Society must be informed by E-mailing copy of both pages of this sheet, once the exchange has been completed.

Once the exchange has been completed, the system must be checked in accordance with section 2.5 of the OMD 6 Installation, Operation and maintenance manual.

The sample probes on all spare detectors must also be exchanged

Once exchanged, all old sample probes are to be destroyed and disposed of in an appropriate way.

**Signed**

**Chief Engineer**

Keep the completed form together with Class Certificates for easy verification of modification.

Oil Mist Detector - Sample Probe Exchange Return Sheet

Vessel:

Hull Number:

Owner / Operator:

OMD Control Panel Serial Number:

OMD Detector Serial Numbers		
Engine N°	Detector	Serial N°
	1	
	2	
	3	
	4	
	5	
	6	
	7	
	8	
	9	
	10	
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OMD Detector Serial Numbers		
Engine N°	Detector	Serial N°
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	41	
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## **Instruction sheet for the exchanging of sample pipe on a Graviner MK6 Oil Mist Detector Pt No E3561-301**

### **Contents**

Replacement Sample Pipe  
Hexagon Keys 2.5 mm & 4.0 mm  
17.0mm 'O' Ring  
79mm Gasket  
Returns sheet.

### **Tools Required**

Adjustable spanner suitable for a ¾ inch BSP nut.

**Note: Detector heads should only be removed with the engine at a stand still, to prevent hot oil coming out of the base fixing hole.**

### **Procedure**

#### **Removal of sample pipe.**

1. Remove power from MK6 OMD controller
2. Disconnect cable assembly from top of detector.
3. Loosen lock nut.
4. Unscrew detector from engine and remove.
5. Using the 4mm hexagonal key, loosen the 2 fixing screws in the assembly base and separate detector head electronics from sample pipe base. Set carefully to one side on a clean surface.
6. Remove the cyclone from within the sample pipe base, using the 2.5mm hexagonal key to loosen the single screw. See figure 2
7. Remove cyclone and screw. See figure 3
8. Sample pipe can now be pulled out of the base.

#### **Fitting of new sample pipe.**

9. Slide the 17mm 'O' ring on to the sample pipe in to the position shown in figure 1.
10. Push new sample pipe into base, ensure sample holes are pointing down and that the female threaded hole is visible at the bottom of the hole for the cyclone.
11. Replace cyclone into hole above sample pipe, making sure that the flat end of cyclone is upper most. Fix in place using 2.5 mm hexagonal screw.
12. Fix sample pipe base onto detector head electronics using the 4 mm hexagonal screws. A replacement 79mm gasket has been provide for the detector head electronics if required.
13. Screw detector head back into engine and lock in place using lock nut. Ensure detector head electronics are upright, so that the connector is on top.
14. Reconnect cable assembly to detector.
15. When all detectors on engine are reworked, reconnect power to the Mk6 controller and carry out functional tests. See section 2.5 of operation manual.
16. Complete the Returns Sheet and return this to Kidde Products.

