



Service letter

SL08-492/JVG  
March 2008

## Rubber Diaphragm Sealings in Crankcase Oil Outlets

Action Code: WHEN CONVENIENT

The crankcase lubricating oil outlets guide the lubricating oil from the crankcase to the bottom tank. A diaphragm at the outlet pipes prevents water and other liquids in the area from contaminating the main engine lubricating oil system, which could lead to fatal damage of the main engine bearings.

According to our Checking and Maintenance Schedule in the instruction manual of MAN B&W engines, we recommend to check the condition of the diaphragm in the crankcase oil outlet every 32,000 hours of operation and to replace the diaphragm if necessary. The procedure concerns rubber diaphragms as well as metal bellow diaphragms. However, due to the risk of material problems in rubber diaphragms, we recommend to replace the rubber diaphragms at every scheduled inspection, which is noted in our checking procedure (no. 912-5.1) for Crankcase Oil Outlet, enclosed with this letter. It should be noted that the membranes are normally supplied by the shipyard and not by the engine manufacturer.

We draw your attention to the above-mentioned schedule and our procedure and inform you as follows:

### How to avoid defect rubber diaphragm

To avoid water entering the main engine sump tank through a defect crankcase oil outlet, it is recommended to:

- Inspect the diaphragm sealing in the crankcase oil outlet every 32,000 hours of operation and replace the diaphragm if necessary. Always replace rubber diaphragms.




- Inspect the diaphragm sealing at the earliest opportunity after delivery of a new-building. In case of a rubber diaphragm, make sure the material is oil resistant and replace if this is not the case.
- Inspect the diaphragm sealing at the earliest opportunity when taking delivery of an existing ship and replace the diaphragm if necessary. Always replace rubber diaphragms.

Questions or comments regarding this SL should be directed to our Dept. LEE4.

Yours faithfully  
MAN Diesel A/S



Carl-Erik Egeberg



Niels B. Clausen

The crankcase oil outlets guide the lubricating oil from the crankcase to the lubricating oil bottom tank. The sealings of the crankcase oil outlets must be checked at regular intervals, for example during dockings. The crankcase oil outlets may be equipped with either rubber diaphragm sealing or metal bellow sealing.

**Note!**

If the water content of the main engine lube oil is rising, this may indicate that the crankcase oil outlet sealings are fractured.

**Rubber diaphragm sealing**

- To access the rubber diaphragm sealing remove:  
Screws A  
Grating B  
Screws C  
Cover plate D  
Screws E  
Steel ring F.
- Lift away the rubber sealing diaphragms G and examine each diaphragm closely. In case of any rips or tears in the diaphragms, they must be replaced.

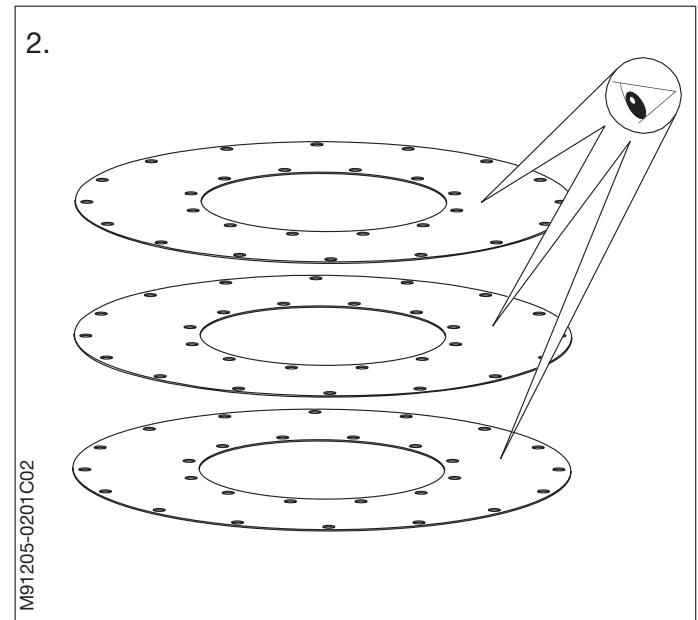
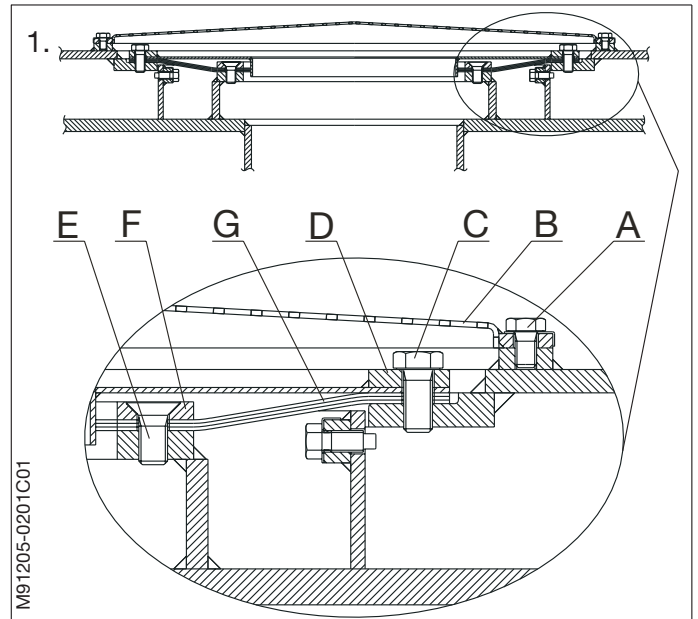
**Note!**

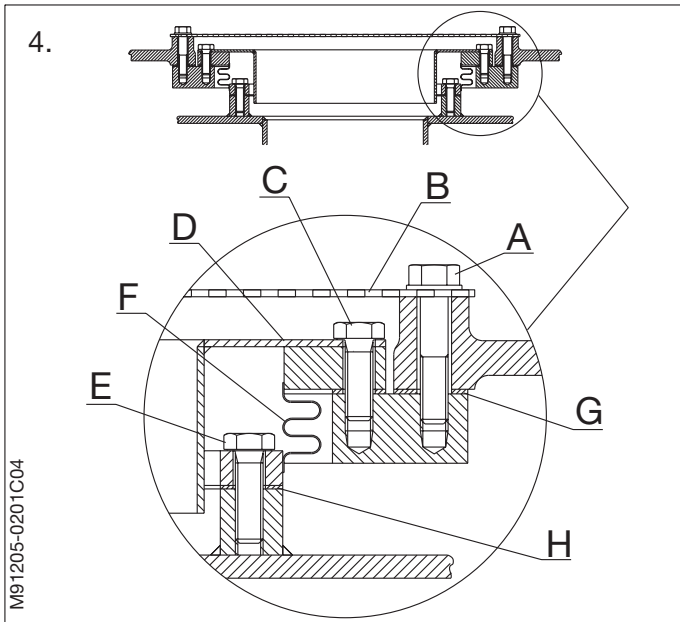
It is strongly recommended to always replace the diaphragms during inspection. If unavailable, new diaphragms may be made from three layers of 2 mm thick oil and temperature resistant rubber.

- Mount:  
Rubber sealing diaphragms G  
Steel ring F  
Screws E  
Cover plate D  
Screws C  
Grating B  
Screws A.

**Note!**

Remember to fit new locking plates at screws A.

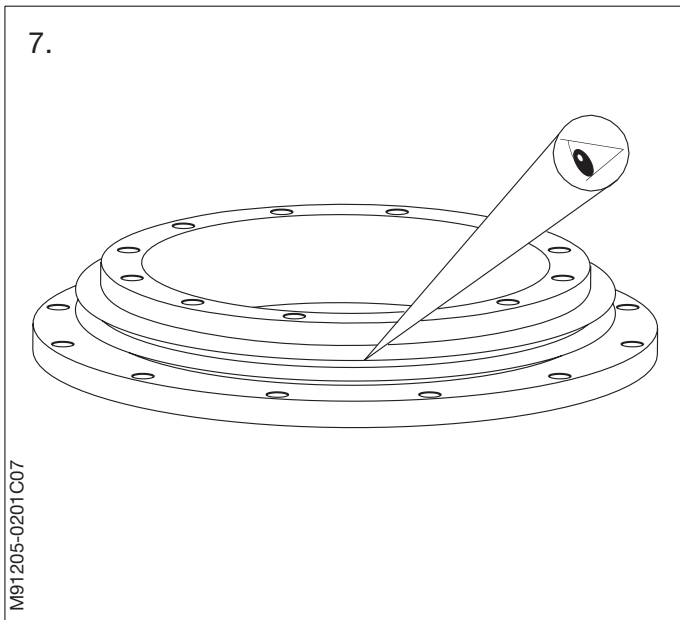


**Metal bellow sealing**

4. Remove all screws A and grating B.
5. Remount four of the screws A at diametrically opposite positions.
6. Remove:  
Screws C  
Cover plate D  
Screws E.
7. Lift away metal bellow sealing F and examine it closely. If any cracks or punctures are found in the metal bellow sealing, it must be replaced.

**Note!**

It is recommended to always replace the metal bellow sealing during inspection.



8. Replace gaskets G and H.
9. Mount metal bellow sealing F.
10. Mount:  
Screws E  
Cover plate D  
Screws C.
11. Remove the four screws A.
12. Mount grating B.
13. Mount all screws A.