



Service Letter

SL02-412/NIM  
December 2002

**Fuel Pump Top Cover**  
**L/S35MC, S46-50-60-70MC-C**  
**(Fuel pumps without VIT)**  
Action Code: AT FIRST OPPORTUNITY

Dear Sirs

Since the introduction of the S-MC-C engines in 1997, a few cracks have been experienced on fuel pump top covers. The cases experienced indicate that such incidents occur, if at all, rather early in the engine lifetime.

The cracks are initiated at the edge between the central bore and the inclined bores, due to the lack of the specified manual finishing of the transition edge between the central bore and the inclined bore. The crack-initiated area is shown in Fig. 1.

We have noted that, in each case, the crack has developed into the bore for the suction valve, whereby high-pressure fuel is pumped into the low-pressure chamber. This reduces the fuel injection pressure, and the alarm for low exhaust gas temperature will be sounded so that the crew has the possibility of correcting the failure. We have not received any reports of cracks developing in such a way that fuel leaks out into the engine room.

Our investigation has shown that the safety margin against the development of cracks is sufficient, provided the specified manual finishing of the transition between the central bore and the inclined high-pressure bore has been carried out.

In order to eliminate the need for manual finishing during production, and as an alternative to this, we have introduced a modified design for future top covers. The design is shown in Fig. 2.

The modification involves the introduction of a horizontal bore connecting the vertical central bore and the inclined bores.

We recommend checking whether the spare cover is of the original design. If this is the case, please check the transition between the vertical bore and the inclined bores. The transition area must have a radius of min. 0.5 mm. On the spare top cover, the sharp edge must be removed and a rounding of min 0.5 mm must be made.

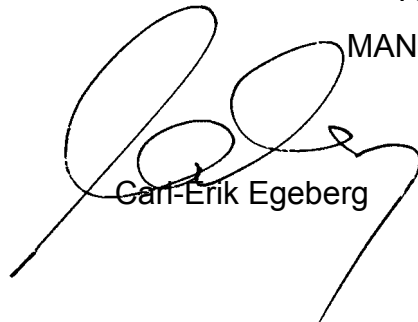
We consider that removing the sharp edge, as described, will rectify the cover, thus we recommend that you keep two spare covers on board.

In the event of any doubt about the execution of the top cover, please contact the engine supplier for clarification.

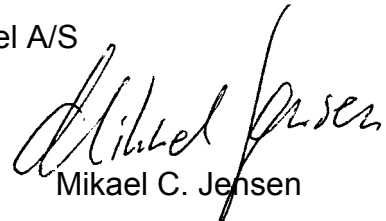
Questions or comments regarding this SL should be directed to our Dept. 2300.

Yours faithfully

MAN B&W Diesel A/S



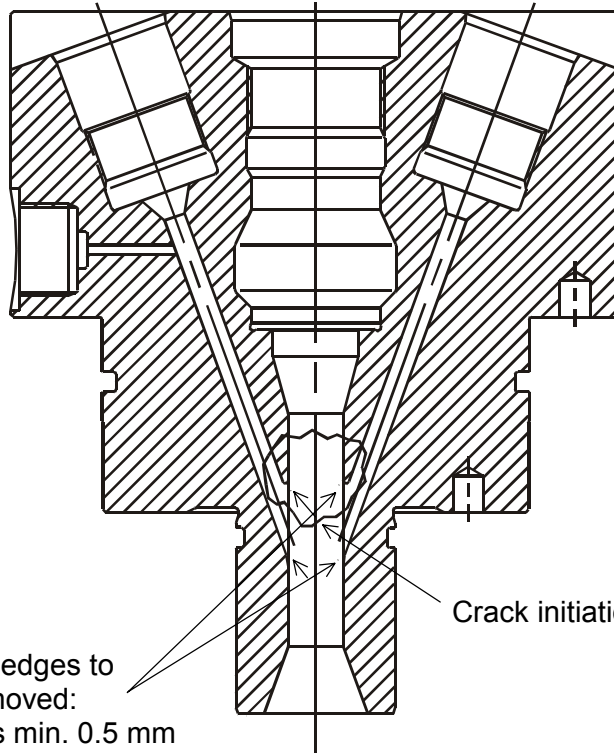
Carl-Erik Egeberg



Mikael C. Jensen

Encl.

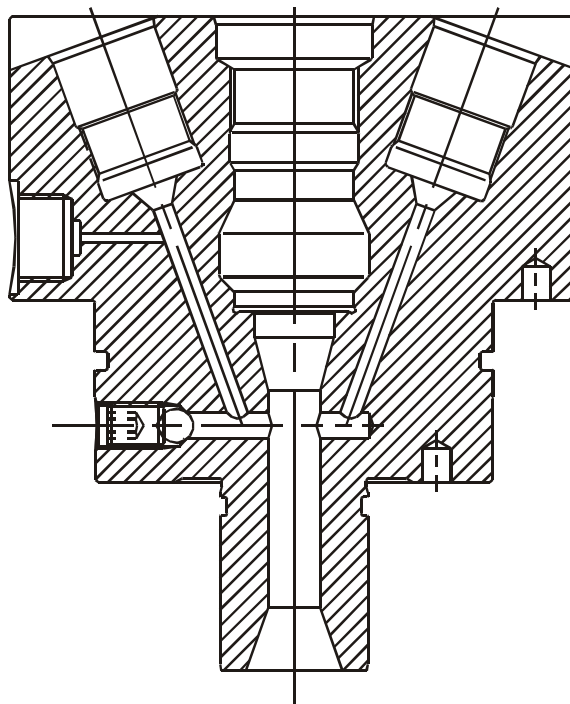
### Fuel Pump Top Cover



*Fig. 1:  
Previous design*

Sharp edges to  
be removed:  
Radius min. 0.5 mm

Crack initiation area



*Fig. 2:  
Modified design*