



Action code: AT FIRST OPPORTUNITY

**Loosening of Plugs in Piston**

SL2015-601/MIKA  
July 2015

**Concerns**

Owners and operators of MAN four-stroke diesel engines.  
Type: L28/32H, L28/32A, V28/32H, V28/32S, V28/32A, L23/30, L23/30H, L23/30A, V23/30, V23/30A

Dear Sirs

We have experienced unintended loosening of internal plugs in the pistons for the listed engine types.

In the worst-case scenario, the loose plugs may fall out of the threaded hole and cause damage to the piston and liner.

Investigations indicate that the root cause for the loosening of the plug is insufficient cleaning of the threaded hole and missing loctite/glue during assembly. Plugs assembled correctly with loctite has a safety factor of more than 3.0 compared to the installation force.

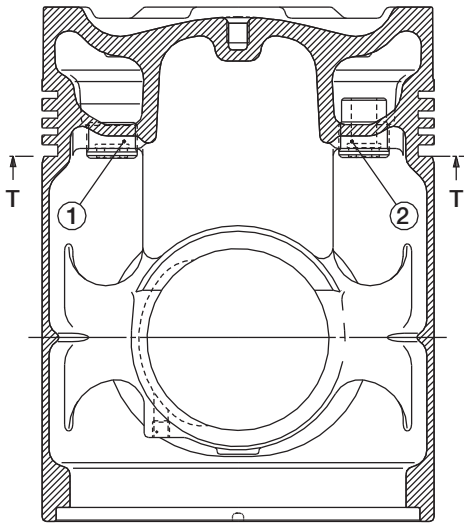
Based on these findings MAN Diesel & Turbo recommends verifying the tightening torque by loosening the plugs with 150 Nm at the first opportunity. If the plugs are found to be loose, the threaded hole and plugs must be cleaned properly with a steel brush and Loctite 7063, and the plugs must be reassembled and secured with Loctite 2701 or Loctite 263 and tightened with a torque of 100 Nm. We attach a detailed instruction for re-assembling of the plugs.

Yours faithfully

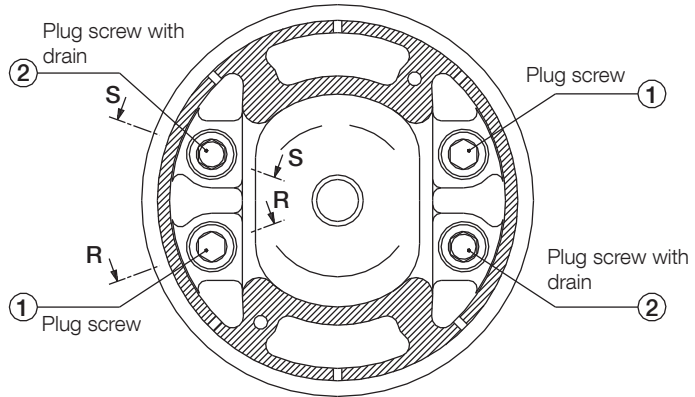
  
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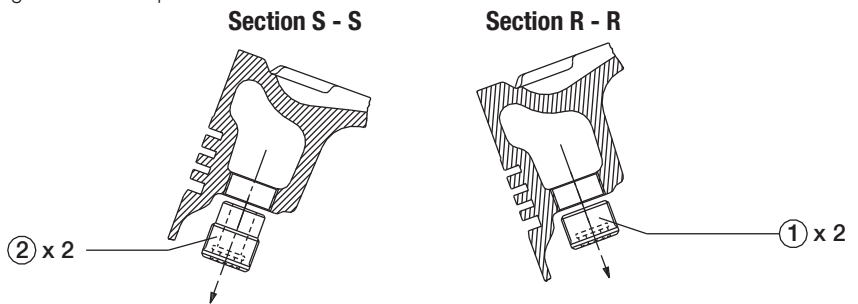
Section T - T  
Piston seen from bottom



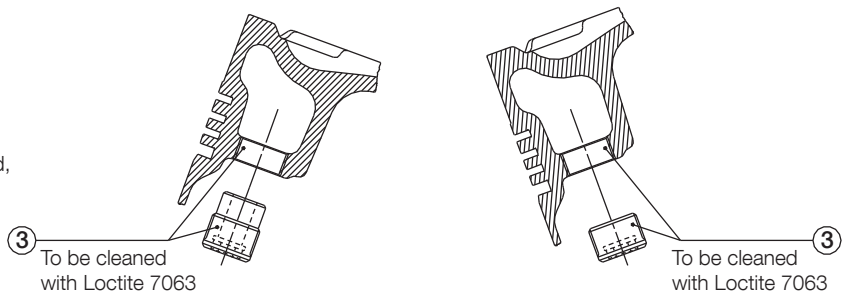
- ① Plug screw
- ② Plug screw with drain
- ③ Loctite 7063
- ④ Loctite 2701 or Loctite 263

Verification:  
Check the tightening by loosening the plugs with 150 Nm  
If the plugs are tightened and secured, no further step is needed  
If the plug are found loose, proceed according to the next step

Dismantling:  
Remove plug screw pos. 1 and 2.



Re-conditioning:  
Plug screw pos. 1, 2 and the threaded hole in the piston to be cleaned properly with a steel brush and Loctite 7063.  
If plug screws pos. 1 and 2 are damaged, new ones to be installed.



Re-assembly:  
Pos. 1 and 2 to be fixed with pos. 4, Loctite 2701 or Loctite 263.  
Please ensure correct amount of Loctite to plug and thread.  
Tighten with tightening torque of 100 Nm.

