Dear Sir or Madam

This Service Letter provides operating guidelines for the liner jacket cooling water bypass basic (JBB) system when operating continuously on low-sulphur fuels (from 2020 and onward).

2020 IMO rules dictate the use of fuels with maximum 0.5% sulphur when a scrubber is not applied. Operation on low-sulphur fuels will reduce corrosive wear to a degree where wear is easily controlled without an increased liner cooling water temperature.

In SL2019-671 it was recommended to deactivate the JBB system when using up to 0.50% S VLSFO. The present Service Letter describes how to deactivate the JBB system.

Note that the engine cooling water outlet (CWO) can be adjusted to 85°C when JBB is deactivated.

If you have any questions or inquiries regarding this Service Letter, contact our Operation Department at Operation2S@man-es.com. For questions regarding spareparts contact PrimeServ at Primeserv-cph@man-es.com.

Yours faithfully

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Concerns
Owners and operators of MAN B&W two-stroke marine diesel engines.
Type: All MAN B&W engines equipped with jacket cooling water bypass basic.

Summary
When using low-sulphur fuels, the jacket cooling water bypass can be deactivated on engines equipped with the:
- Simple JBB
- Common JBB
and the cover cooling water outlet temperature can be adjusted to 85°C.

Other relevant Service Letters are:
SL2019-671
Instructions for deactivating JBB
The engine must be stopped before deactivating the JBB system.
NOTE: Due to variations in the piping for different engine types, the actual layout of the piping may vary slightly from the piping shown in the sketches.

Simple JBB version 1, rebuild original piping
1. Close the cooling water inlet and outlet valves and open the cooling water drain.
   ![Diagram of cooling water system]

2. Remove the bypass pipes and the orifice plates.
   ![Diagram of bypass pipes and orifices]

3. Remove the non-flanged cooling water connection pipes from the manoeuvring side of the cylinder liner.
   ![Diagram of non-flanged pipes and orifices]
4. Remove the flanged cooling water connection pipes from the exhaust side of the cylinder liner.

5. Remove the JBB type cooling water inlet pipe.

6. Re-mount the four original cooling water connection pipes between the cylinder liner cooling jacket and the cylinder cover cooling jacket. Remember to fit new O-rings on the connection pipes and new gaskets on the cooling water outlet blocks.

7. Close the drain valves and open the cooling water inlet and outlet valves. Check the system for leakages.

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**Simple JBB version 2, modify JBB piping**

The preparations are the same as steps 1-4 for version 1.

5. Modify the JBB type cooling water connection pipes, both flanged and non-flanged, by removing the two retaining rings and the orifice mounted inside each pipe and fit blind flanges on the flanged connection pipes.

6. Reuse the JBB type cooling water inlet pipe after fitting blind flanges on the side flanges of the inlet pipe.

7. Close the drain valves and open the cooling water inlet and outlet valves. Check the system for leakages.
Close the drain valves and open the cooling water inlet and outlet valves. Check the system for leakages.

**Common bypass version 2, modify piping**

1. Drain off the engine cooling water

2. Close the shut-off butterfly valve at the three-branch manifold and either remove the handle or lock it securely against tampering.

3. Remove the thin steel orifice between each liner jacket cooling water outlet and the pipe flange.

4. Close the drain valves and open the cooling water inlet and outlet valves. Check the system for leakages.

**NOTE:** Due to variations of the piping for different engine types, the actual layout of the piping may vary slightly from the piping shown in the sketches.

1. Drain off the engine cooling water.

2. Mount the U-connection pipe between the main pipes for cylinder liner cooling water outlet and cylinder cover cooling water inlet. Use new gaskets.

3. Remove the three-way distributor pipe, including orifice plates and valve. Fit blind flanges.

4. Remove the thin steel orifice between each liner jacket cooling water outlet and the pipe flange.