
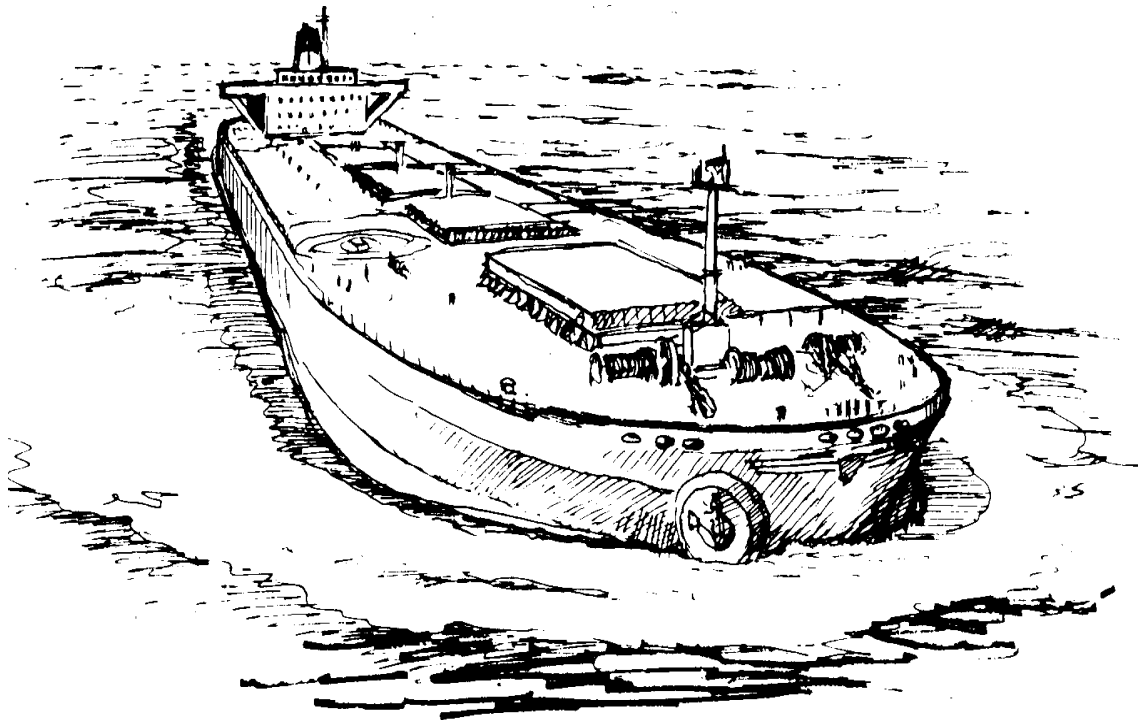



<b>Customer:</b>				
<b>Doc. no.</b>	Service Bulletin 10-01	<b>Pusnes document no.</b>	SB 10-01	
<b>Title:</b>	<b>Max Clearance or Rate of Wear for Bearing Bushings.</b>		<b>Rev No:</b>	
			<b>Rev Date:</b>	27 Jun. 11

# SERVICE BULLETIN



## Max clearance or rate of wear for split bearing and bushings



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## Max clearance or wear of split bearings and bushings.

This document applies for installations equipped with Pusnes™ deck machinery.

Wear of bushing depend on load and interval of greasing. Less grease gives more wear. A general rule for plain bearings used in a marine application is to grease the bearings both before and after use. A bearing filled with grease will give an additionally protection for rust to the bearing surface on shaft.

A too big clearance in the bearings gives allowance for faster wash out of grease leaving the shaft unprotected against seawater and rusting.

The clearance between a shaft and a **new** bushing will vary between 0,4 and 0,8 mm.

Max clearance or rate of wear will depend on depth of grease grooves inside the bushing, see figure 1 for details.

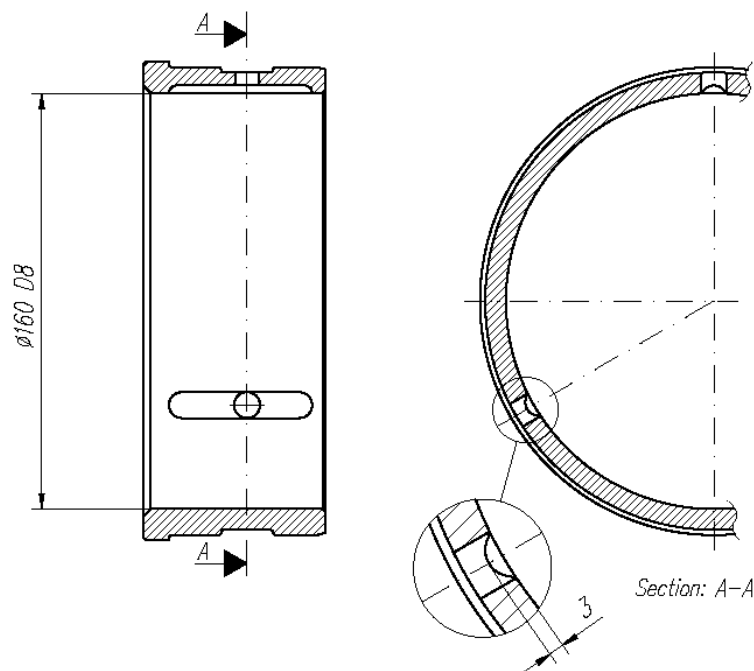



Fig. 1, Standard Bushing

**Main rule for renewal of plan bearings are:**

- **Max radial clearance or wear  $\leq 2$  mm.**
- **Min thickness of bearing flange  $\geq 5$  mm.**

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### Cautions:

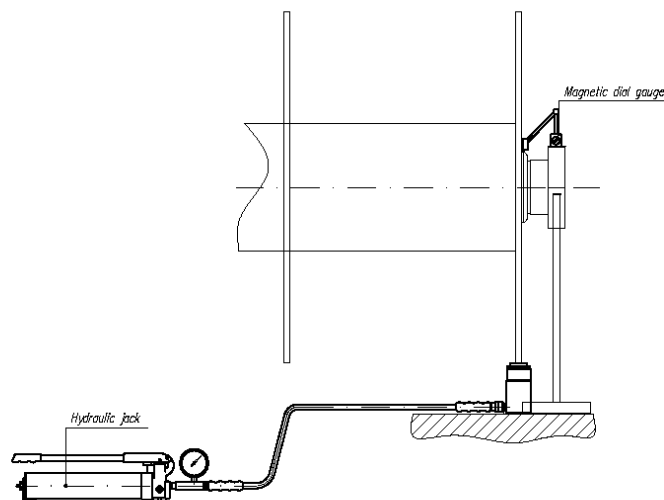
Should the bearing clearance exceed 5 mm, it is highly possible that the shaft also has been worn or rusty. The only method to check if shaft is worn is to remove the bushing or part from the shaft.

A worn down shaft surface has to be repaired by welding and final turning.

There are two methods to check the clearance in a bushing:

1. Use feeler gauge where access to bushing clearance is possible.
2. Use a magnetic dial gauge and a hydraulic power jack or similar to lift the drum, shaft or part where it is not possible to use feeler gauge. Place the magnetic dial gauge on a surface that will not move when you lift. Place the dial gauge needle on the moving part and reset to zero. Lift the part until the pointer stop moving and read the clearance.

***NOTE! By lifting a drum you may also lift the shaft, and the clearance of nearest bearing bracket bushing can affect the result. If so subtract the clearance of nearest bearing bracket bushing.***




**Fig. 2. Measuring by use of dial gauge and hydraulic jack**

Report results to Aker Pusnes for recommendations and solutions to problem.

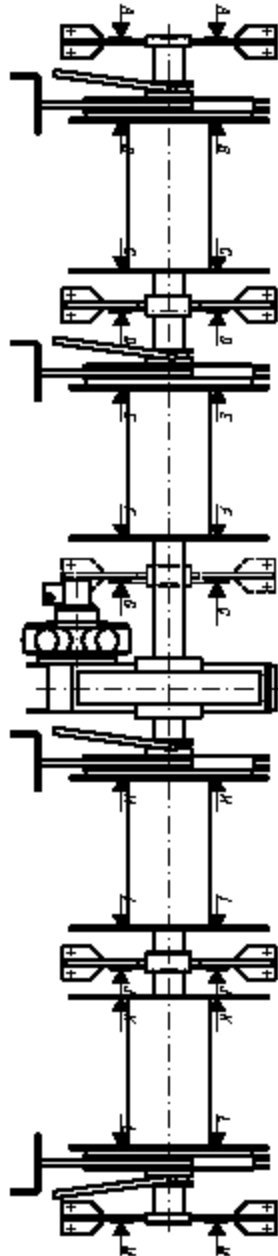
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Sketch Number	Dimension in mm.												
	A-A	B-B	C-C	D-D	E-E	F-F	G-G	H-H	I-I	J-J	K-K	L-L	M-M
M1													
M2													
M3													
M4													
M5													
M6													
M7													
M8													



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Weldless Number	Dimension in $\mu\text{m}$ .						
	A-A	B-B	C-C	D-D	E-E	F-F	G-G
W1							
W2							

