



TECHNO NEWS

MES TECHNOSERVICE CO., LTD.

TECHNICAL DEPARTMENT / DIESEL ENGINE SERVICE DIVISION

Modification and up-grade of Alpha Lubricator system		No.067	
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		PREPARED	H. Nakamura
ENGINE TYPE	Alpha lubricator system adoption engines	DATE	May 18 th ,2010
<p>The adoption of the Alpha lubricator system have been taking place since 2002 on our Mitsui MAN B&W engines, and we have had very good experience of the system and cylinder condition.</p> <p>As 7.5 years has passed since first application, major maintenance is going to start.</p> <p>This information instructs upgrade / modification which we carried out due to functional improvement or change of supplier. Please refer to this information for your maintenance.</p>			
PRIORITY			
IMMEDIATELY <input type="checkbox"/>	EARLIEST CHANCE <input type="checkbox"/>	DRY DOCK <input checked="" type="checkbox"/>	

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1. Accumulator

The standard type of accumulators was changed at certain time from rechargeable type to complete sealed type for easy maintenance. Replacement of these accumulators is recommended every five years regardless rechargeable type or complete sealed type.

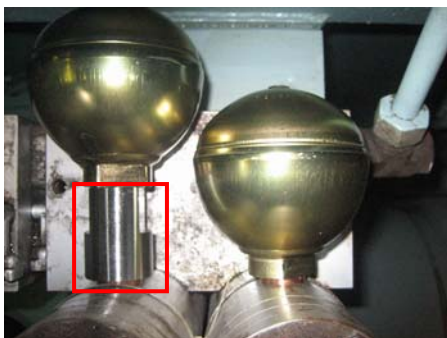
Replacement from rechargeable type to complete sealed type can be done without any modification on engines with cylinder bore 600mm or smaller. However an adaptor is necessary on engines with cylinder bore 700mm or larger to make step to facilitate bigger size of accumulator.



<Rechargeable type>



<Complete sealed type>



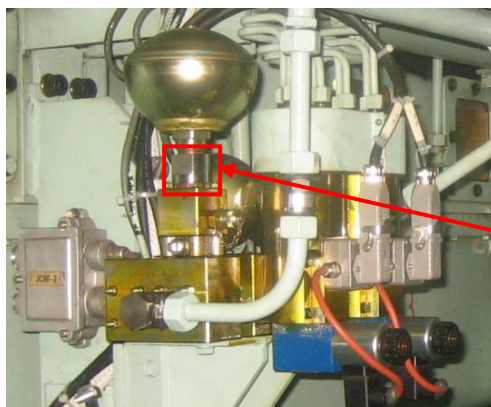
Adaptor is necessary on one side of outlet accumulator when replacement from rechargeable type to sealed type.

Order for this adaptor is needed only at first replacement.

2. Orifice for inlet accumulator (only cylinder bore 700mm or above)

On lubricators with two cylinders, we have sometimes experienced malfunction especially “B” side cylinder. According to our investigation, the cause is presumed to be cavitation which is generated when piston moves. Our investigation result concluded that additional orifice for inlet accumulator is effective.

Orifice is installed between inlet accumulator and lubricator block.



Adaptor with orifice

3. Pin type connector (Crimp contact)

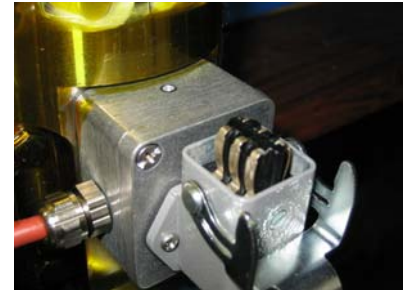
Though spring type contact has been used for connector on lubricator, we have experienced some malfunction such as feed back signal failure because heavy vibration brought uneven contact.

As a countermeasure, pin type contact (so called Crimp contact) has been applied and good service experiences have been obtained.

Though this kind of failure happens very rarely even long time operation, we would like to recommend to be changed to Crimp contact in your opportunity of lubricator overhaul.



Connector

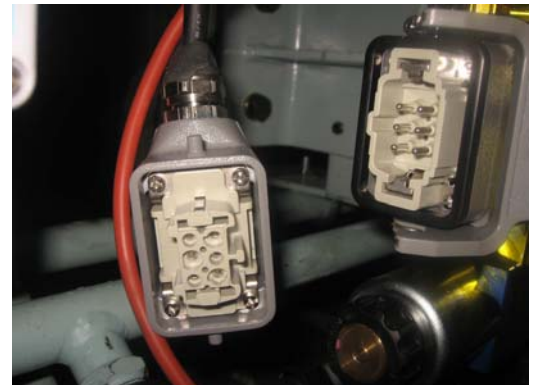
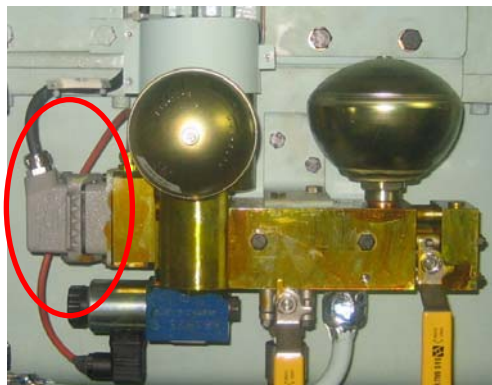


<Spring type contact>



<Pin type contact>

New type of connector has been equipped recently on engines with cylinder bore 600mm or smaller as shown in below photo. This kind of connector also has pin type contact inside.



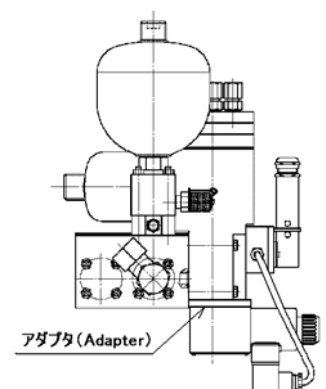
4. Solenoid valve

Supplier of solenoid valve has been changed (Bosch to Rexroth), and size of solenoid valve also changed.

Therefore an adaptor is necessary when replacement is made from Bosch product to Rexroth product.

This adaptor is necessary when first replacement time, and not necessary to order from second time.

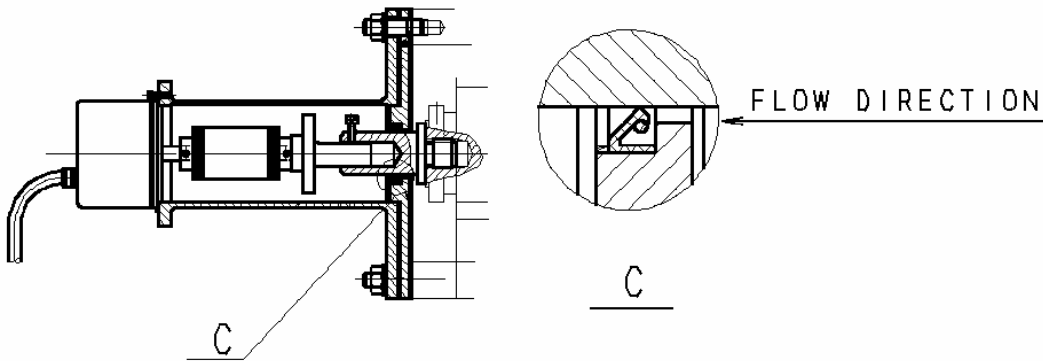
Solenoid valve is recommended to be replaced with new every five years.



4. Oil seal for rotary encoder driving shaft

There was no seal between rotary encoder housing and crank case in early stage.

There is no problem even lubricating oil comes into rotary encoder housing, however oil seal on the driving shaft is applied on our latest engines to prevent the oil leakage from end cover of crank case to the rotary encoder housing as shown in the below drawing.



We would like to recommend applying oil seal at your overhaul chance.

5. Modify of rotary encoder

Regarding the Alpha lubricator system in new ship and retro fitting of first stage, rotary encoder of figure-1 is mainly used.

Rotary encoder is recommended to be replaced with new every ten years for importance of this device and vibrations etc.

However, at certain time we changed the rotary encoder from figure -1 to figure-2 which has equivalent performance at low cost and same responsibility, and we have good service experiences.

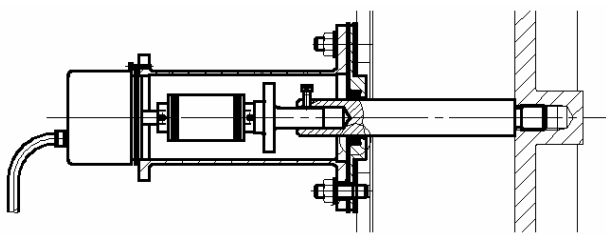


Figure-1: Made in MAN B&W

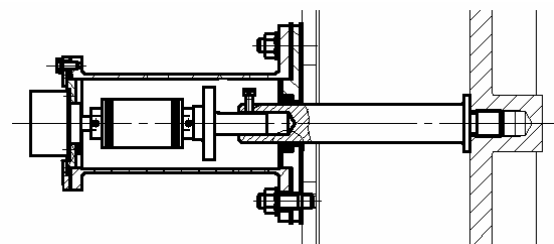


Figure-2 Made in HENGSTLER

Original specifications for each vessel are different, therefore necessity of modification is also different according to time of production or retro fitting.

Please contact MES Technoservice Co., Ltd. for your order or inquiry.