

# A13 2011/12 to A14&A18 2014/15



What's new? K98 to S90  
for UASC Superintendents  
Oct. 2014



# A13 2011/12 to A14&A18 2014/15

What else, nice to know.



1

ECS electrics; noise counter, independent insulation monitoring and multiple MPCs in cabinet.

2

Fuel valves; short high pressure pipes/distributor block, guide rings in holder and „close slope“ modified.



- Noise counter on CCUs allows for easier trouble shooting.
- New MPC cabinets, simpler cabling, more compact design.
- Independent isolated power supply of all controllers allows for insulation level to be monitored for each controller and facilitates easier trouble shooting.

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Trouble shooting feature made easier to use.

- Insulation levels for alarm are:
  - First alarm level 70 kΩ
  - Second alarm level 24 kΩ

Maintenance ▶ Troubleshooting				2013-07-04 16:27:42		Alarms
HCU	HPS	HCU Events	HPS Events	Insulation		
Unit ID	Insulation [kOhm]	Noise Pulse Counter		Unit ID	Insulation [kOhm]	Noise Pulse Counter
ACU1	120	0		CCU1	120	0
ACU2	120	0		CCU2	120	0
ACU3	120	0		CCU3	120	0
ECUA	120	0		CCU4	120	0
ECUB	120	0		CCU5	120	0
EICUA	120	0		CCU6	120	0
EICUB	120	0		CCU7	120	0
				CCU8	120	0
				CCU9	120	0
				CCU10	120	0
				CCU11	120	0
				CCU12	120	0

Engine

Auxiliaries

Maintenance

System View  
I/O Test

Invalidated  
Inputs

Network  
Status

Function  
Test

Trouble-  
Shooting

Admin

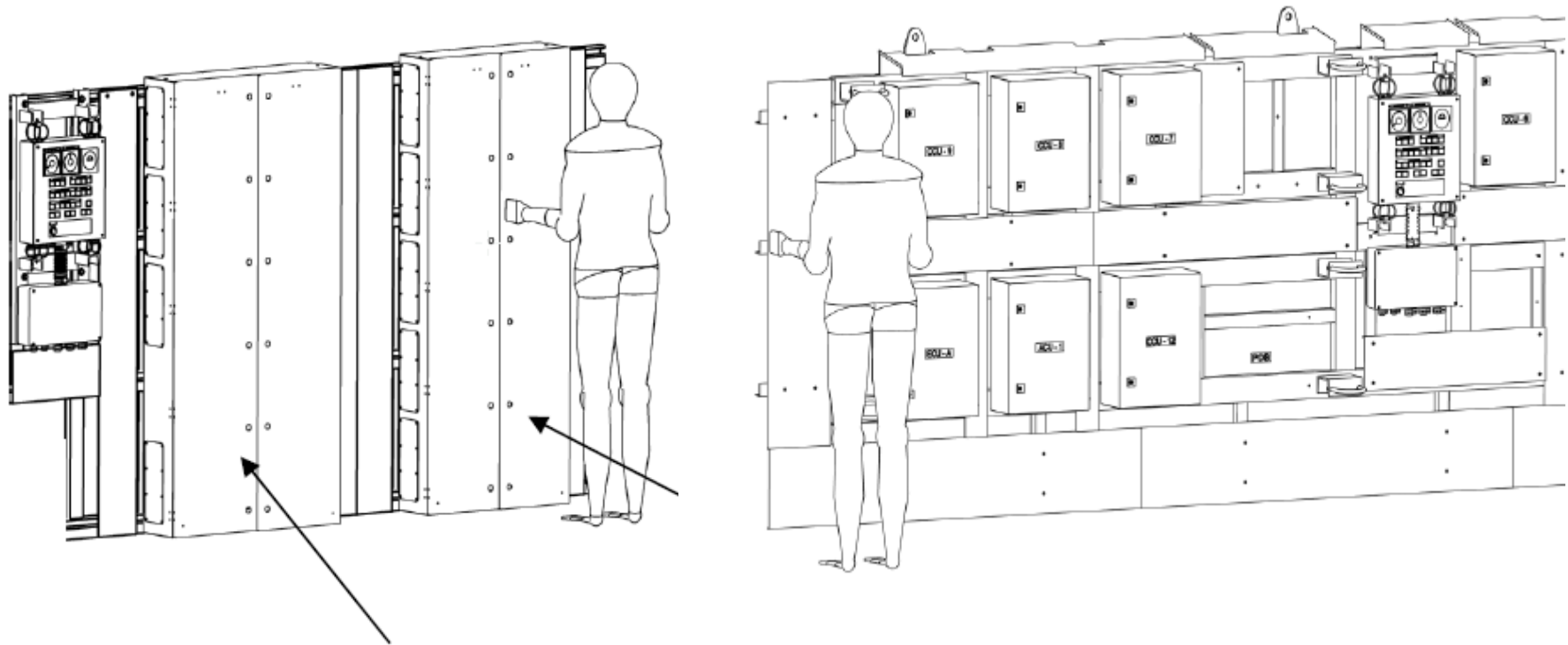
Power Off

Chief

# A13 2011/12 to A14&A18 2014/15



New cabinets for Multi Purpose Controller (MPC).



MPC for ECU, ACU etc

1

ECS electrics; noise counter, independent insulation monitoring and multiple MPCs in cabinet.

2

Fuel valves; short high pressure pipes/distributor block, guide rings in holder and „close slope“ modified.

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Fuel equipment



- “Distributor block” design, means shorter fuel pipes and easier overhaul.
- “New” fuel valve design with guide rings in the holder.
- Injection profiles modifies (also applied to A13 after delivery).

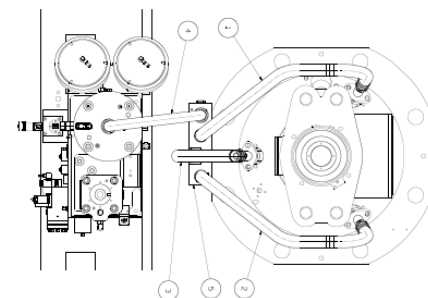
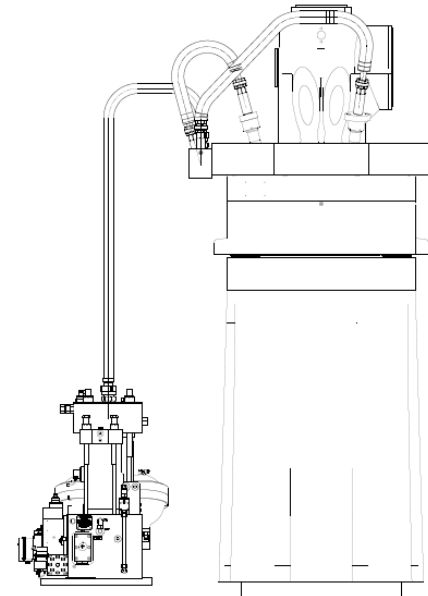
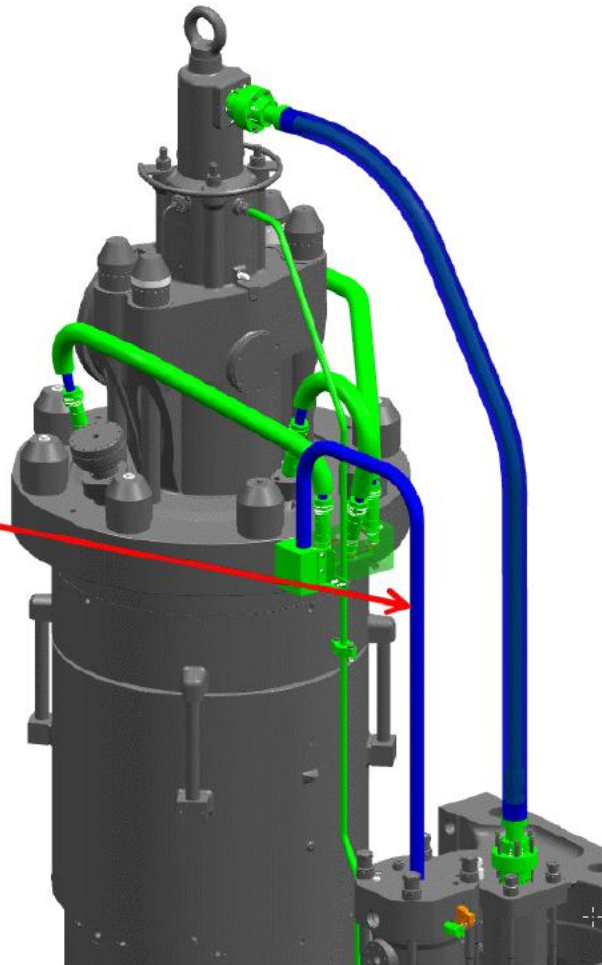
# A13 2011/12 A14 2014

Fuel equipment



New design: (Stick-pipe)

Stick-pipe design





Since the introduction of the 300 bar hydraulic system on the ME engines, we have experienced a reduction in the lifetime of fuel valves. Several improved components have already been introduced successfully in the fuel valves to prevent premature failure.

The most recent issue to be addressed is fretting between the fuel valve holder and the head which causes damage to the O-ring sealing surface leading to leakage of fuel, see Figs. 1 and 2 below.

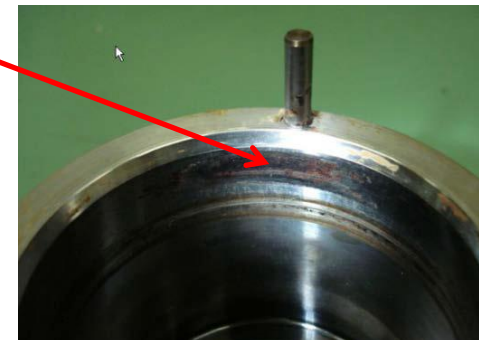
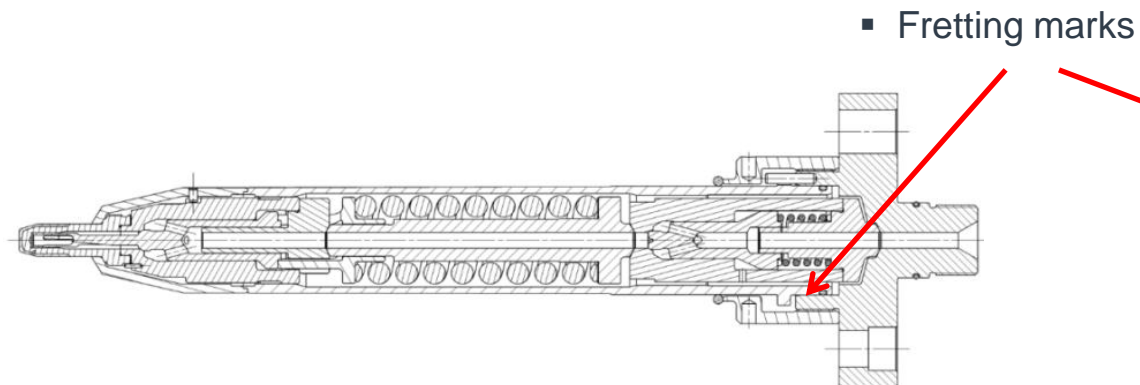


Fig. 1: Fuel valve

Fig. 2: Fretted fuel valve head

However, this issue has been solved by the introduction of guide rings preventing steel to steel contact between valve head and valve holder, see Figs. 3 and 4.

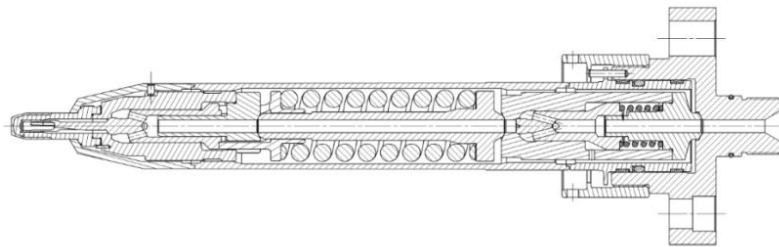


Fig. 3: Fuel valve with guide rings

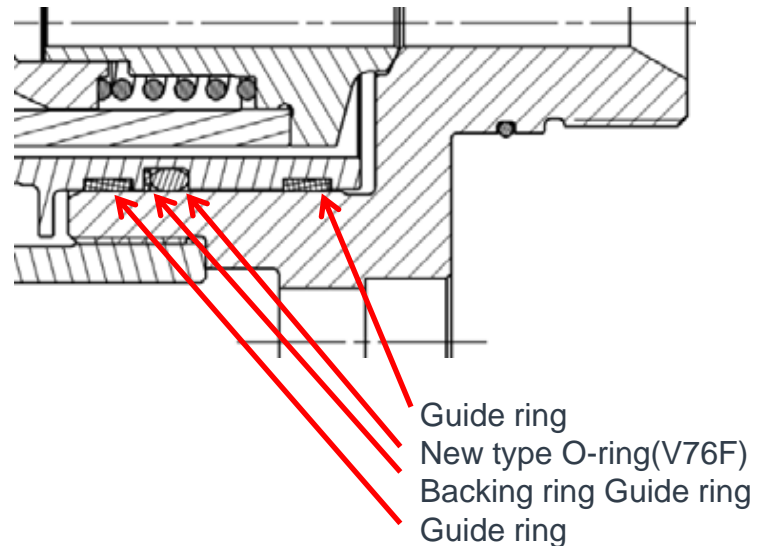


Fig. 4: Fuel valve close-up

Furthermore, stronger spring housings to prevent jumping of the fuel valve are needed which requires new studs for the fuel valves.

# Disclaimer



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This data serves informational purposes only and is especially not guaranteed in any way. Depending on the subsequent specific individual projects, the relevant data may be subject to changes and will be assessed and determined individually for each project. This will depend on the particular characteristics of each individual project, especially specific site and operational conditions.

# Do you have any more questions?



**Peter H. Kirkeby**

MAN Diesel

Low-speed marine

Engineering

Operation Department

Emission Technology