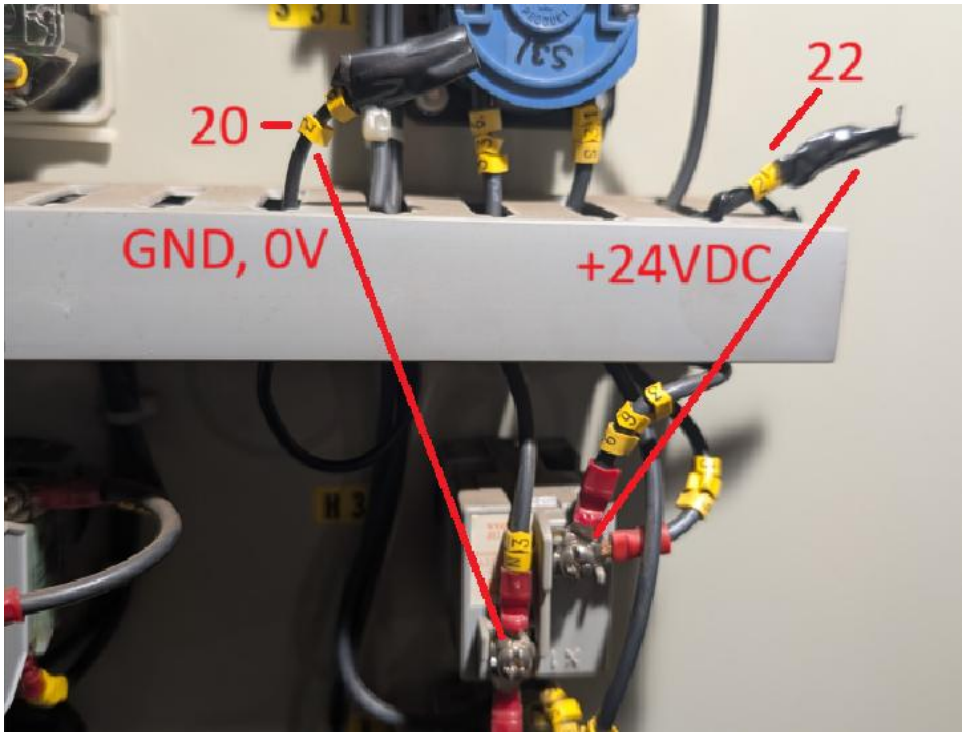
SERVICE REPORT

Customer:	Vestland Marine EU
Customer ref. / PO.:	Marco Coppola
Vessel:	Nanook
Owner:	
Working Place:	Alongside Ålesund
Our order no.:	402009
Our ref.:	Gunnar Ytterland
Our Engineer(s):	Petter Berg, Rune Grande
Date:	13. Oktober 2025

Report regarding: Fault searching MSB sync problems.

Synchronization issues axel generator.

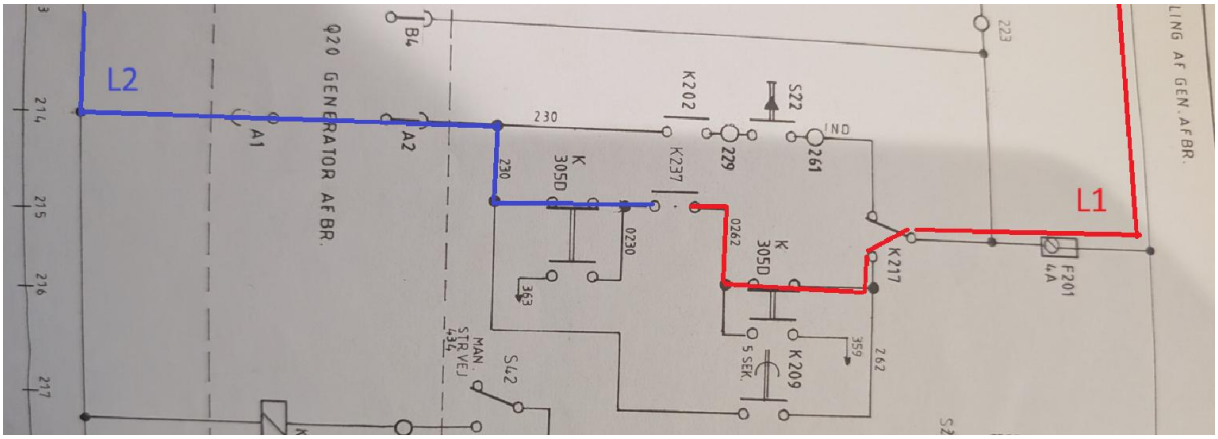
When arriving on boat we get told F303 is blowing all the time, we check drawings and measure the lights this fuse protects, on these we see a 24VDC potential still on the lights in the door, these should be 230VAC and after quite some searching found two new wires marked 20 and 22



These two wires I can't see in any of the documentation, and they've been added in some rebuild, cable shoes, cable type and pathing are all nonstandard to the switchboard. While these were connected fuse F303 instantly blows. I have no idea when or why there are added, cables disconnected for now. After resetting breaker, axel generator breaker automatically syncs to switchboard again and status lights works as they should

Synchronization issues on generator 2

After a while of checking signals and probing voltage potentials we find that the synchronizer K237 for generator 2 does not close the in-sync relay anymore. By the picture below, I've indicated where I have L1 and L2 potentials while trying to synchronize. If K237 had closed, the circuit would've been completed, and the breaker would close. It did not.

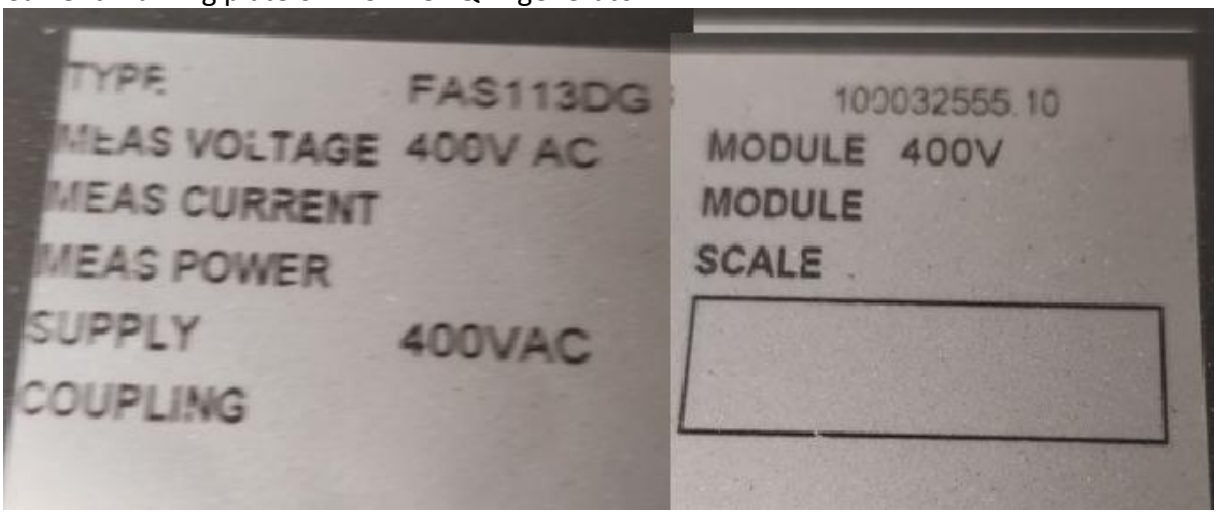


K237 in picture below, is old type synchronizer and in generator 1 you have the new FAS-113DQ component, same type as this one just modern. I can also see that the old K137 in generator 1 has broken before and replaced, the screw holes match the K237 in generator 2.

On phone we talked about ordering a new one, but delivery won't arrive before ship leaves and shipping will cost too much. The ship will decide if they want us to fly in to wherever you are at dock or if you use a local electrical firm for the job.

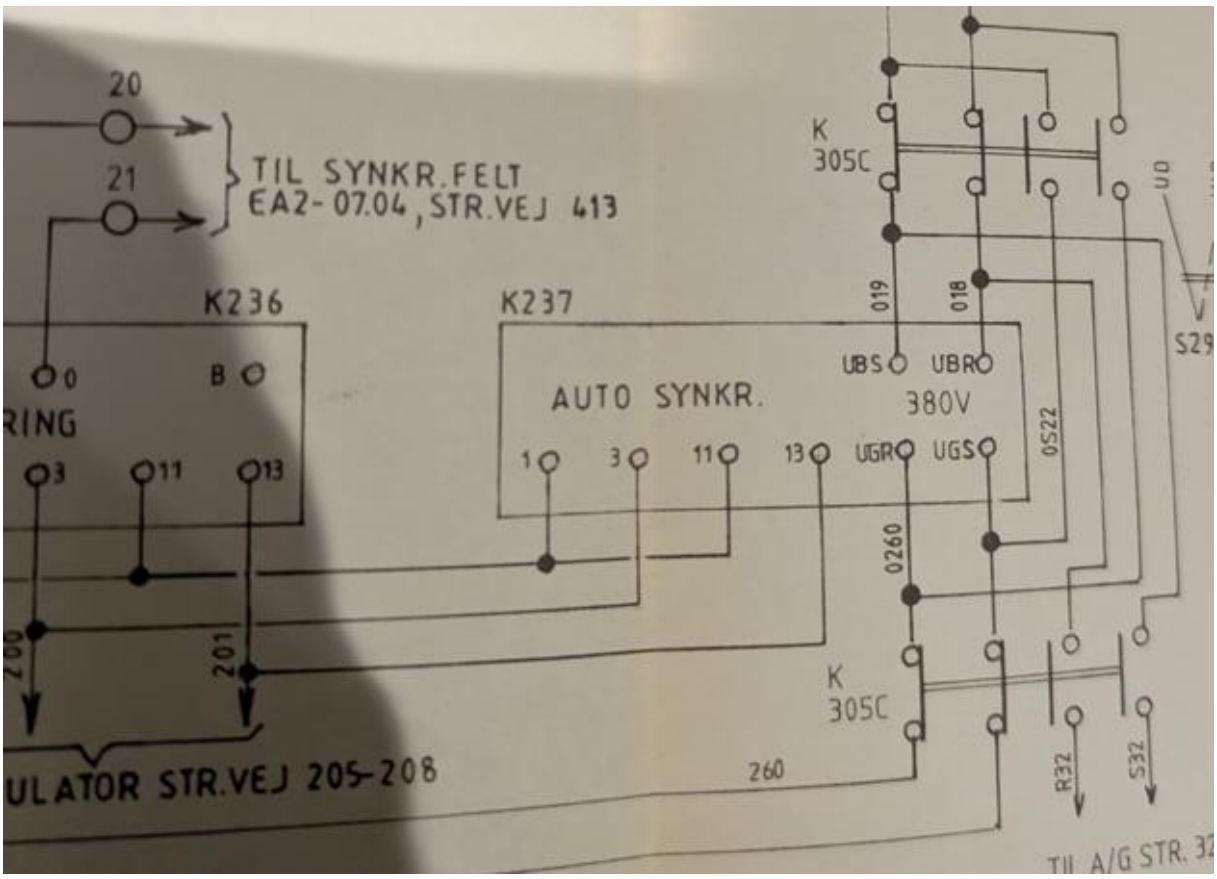
In any case you chose you need a new FAS-113DQ with the following specifications
Measuring voltage = 400V
Supply voltage = 400V

Current marking plate of FAS-113DQ in generator 1



Front view of FAS-113DQ in generator 1

Current connections for K237, including the sync contact in page two above. For local electricians if you chose this option



The only thing I can see is different between these two modules is that the new one requires a supply voltage. Use any 380V fuse inside the switchboard from generator 2 side, do not use busbar voltage to power component.

Others

While still at sea they asked me to figure out some cables and screens on bridge. There are one screen in each console on both side of the bridge. They have input 230V the screens just remain black, no indication of missing video input signal. I also found the splitter and marked both HDMI cables going to each console as well as both 230V supply cables going to consoles, captain informed.

For video input to screens find any video source you want and order HDMI cable long enough to reach splitter, remember to plug it into “Input” of HDMI splitter in port side bridge console.

Breaker Q31

I can see black soot on contacts coming from main body of breaker, the chief has seen smoke coming from breaker, and I can also smell somethings not correct inside there, it smells warm, is a strange smell that makes me feel uneasy when coming from high power switchboard components. Unable to open sufficiently to investigate.

Recommendations

Replace synchronizer to a FAS-113DQ in generator 2
Replace the manual breaker Q31 400A

End of report
Petter Berg
for ACEL AS