



Interview Summary

Please Print Clearly:

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Position: Coast Guard Investigating Officer

I, the undersigned, make the following statement voluntarily, without threat, duress or promise of reward:

CWO [REDACTED] & NTSB conducted a joint interview on April 1, 2021 with the Superintendent Engineer Jesper Petersen with MAN Energy Solutions as a technician on the RIVERSIDE. Representatives from Royston Razor joined representing the MODA dock, Representatives from Welder Leshin joined representing the vessels interest and Liam O' Connell joined representing the P&I club for the vessel. The Superintendent Engineer was not represented by an attorney. The below is my summary of the interview.

The Superintendent Engineer has been in his position for 21 years, and has been 25 years at MAN B&W, and 28 years of experience as an engineer, and prior to that he was an apprentice @ Engine Factory and has a total of 38 years of experience in total.

When he was first investigating the cause of the misfiring, he went through the pneumatic system and valves and all appeared ok. He departed vessel on March 24, 2021, he issued a report from the 16th – 20th, but the owners requested the technician stay onboard until the vessel was released from the CG operational controls issues on the vessel.

Prior to the superintendent engineer arriving onboard, there was a previous technician onboard who checked the pneumatic system and went through other troubleshooting methods.

They conducted a static test on all pneumatic system related to the starting sequence except 3 high pressure valves that would require the engine to be on however, they were not able to engage the engines at the dock. He only made minor adjustments which would not have caused the misfiring.

When released from the dock, they engaged the engine and it started which confirmed remaining valves on the pneumatic side were operation, then at some point the engine failed to start and wouldn't rotate on air even. Mr. Petersen went to the starting air to start the engine, they tried a few times but it would stop at the same crank shaft position. He suspected one of the actuators didn't work, which prevented air from going to the starting air valve and did not move the engine and that is why the misfire happened. Mr. Petersen removed the #6 actuator, cleaned it, lubricated it and replaced it and tested it ahead astern with no further issues.

Mr. Petersen suspected the cause of the #6 actuator sticking was due to lack of maintenance, it should have been inspected on a regular basis. It should be inspected and checked for correct actuation every 8000 running hours.

The superintendent stated that the control air dryer unit that was not operational does have an influence on the valves operation. However the static test indicated to the MAN technician that the control air dryer was not the issue. There is not a requirement for a control air dryer for that system.

When asked if the crew mentioned if they had previous issues starting the main, the technician said this came up that they have had previous issues but that it was intermittent and rarely.

The technician states he cannot state for sure if this actuator failed due to lack of maintenance because he is unsure if the vessel conducted the required maintenance.

To ensure the main engine stays in good working condition, MAN recommends they follow the maintenance schedule. This actuator's satisfactory operation is difficult to assess because it is only visible for a few seconds when the engine is starting and you would have to be looking directly at it at that time to know if it is operating satisfactory. In 900-1, in the manufacturer's recommendation it states it should be inspected every 8000 running hours and overhauled based on observations. The overhaul directions are in the manual.

When asked about the state of the #6 valve, the superintendent stated had accumulating old grease that has been gummed up, a slide that runs along a brass line, grease has been gunked up with dirt and rust from starting air on the starting air side. The valve is moved by the 30 bar system. He stated he could remove it by hand but clearly couldn't not actuate. There was nothing broken, missing or any reason for the failure. It was dirty and required TLC. He stated the crew agreed that the actuator valve was dirty.

The Superintendent was not surprised at the condition of the actuator, and sees this often during dry dock. He has not heard of a vessel having this big of an issue due to the issue identified and stated if the CAPT of the vessel would have put the vessel in the ahead position, it would have been able to then be put in the astern position.

If you want to go to astern position, in the counter clockwise and ahead you start the engine in the clockwise, outercam position is the ahead position and the inner cam position is the astern position. The firing sequence changes based on the direction the vessel is started in. You may be lucky enough if you start in the ahead and then try in astern, you may skip the #6 actuator and get lucky and start the vessel but this is not dictated in the manuals and felt this was common knowledge to try to start the engine in either position.

Every time you stop the engine, the engine is going to stop somewhere, when it stops when it is #6 as the next to start, it will miss. There is a 60 degree window, one revolution is 360 degrees. As opposed to a 12 cylinder engine having a 30 degree window which has a greater degree of probability to start the engine.

When asked about the Chief Engineer canceling the limit. This function is designed for vessels in shallow water when they are fully loaded. Mr. Petersen stated if the engines do not rotate on air, nothing is going to happen, no matter how much oil you put in the system.

When using the low sulfur fuel oil, it is very low viscosity so most of that oil is passing the engine.

The Superintendent Engineer stated that the remainder of the engine room looked pretty good overall. In the future, to prevent this issue in the future, the vessel will be overhauling the pneumatic system every two years to ensure O-rings, slides in the pneumatic valves that is in the report given to the owners. This is in accordance with the service letter issued in 2001. There is no guaranteed, it is not 100%, it may work 10 times, but fail the eleventh time.

CWO [REDACTED]

[REDACTED]