

# MAINTENANCE AGREEMENT FOR THE WORLD'S FIRST LNG-FUELLED PASSENGER FERRY



Joacim Westerlund,  
Technical Fleet Manager at Viking Line Abp

When the world's first liquefied natural gas (LNG) fuelled passenger ferry departed on her maiden voyage in January 2013, her main engines and safety valves for the LNG system were covered by a Maintenance Agreement for the coming 5 years.

– Because of the new LNG technology and the DF-engines, we felt that having a maintenance agreement would give us added value and secure a long-term partner and relationship with Wärtsilä, says Joacim Westerlund, Technical Fleet Manager at Viking Line Abp.

The Viking Line Group, founded in 1959, is a public limited company and a market-leading brand in passenger traffic on the northern Baltic Sea. The company provides passenger, recreation and cargo carrier services using seven vessels on routes between Finland and Sweden and Finland and Estonia. During 2014 Viking Line transported more than 6.6 million passengers and over 600,000 cars. Their newest flagship is the new generation passenger ferry M/S Viking Grace.

## GRACEFUL REVOLUTION

The 2013 built Viking Grace is the world's first large passenger ship powered by liquefied

natural gas (LNG). The LNG fuel decreases the ship's nitrogen emissions and particles by 85 %, and greenhouse gases by 15 %. The sulphur emissions are practically zero. Viking Grace, with a length of 218 metres and a beam of 31.8 metres, is powered by four Wärtsilä 8L50DF main engines and can carry 2,800 passengers.

As the customer did not have any previous experience of DF-engines and the new LNG technology, the solution presented by Wärtsilä was a long-term maintenance agreement



# “Grace is in traffic every day of the week and she is almost fully booked every time.”



- ■ ■ highlighting the financial benefits with a better predictability of service costs as well as the benefits of dynamic maintenance planning.

– We did not even consider any other agreement providers since it was clear from the beginning that we wanted a maintenance contract with Wärtsilä, states Joacim Westerlund.

The signed five-year maintenance agreement included all normal maintenance, such as overhauls for two of the engines, and all the necessary spare parts for all four engines, according to the engine maintenance manual.

– There was also some additional work included for the safety valves of the LNG-system, says Westerlund.

## OPERATIONAL 24/7 – A MUST

The agreement encourages close co-operation between Viking Line and Wärtsilä. This will extend the lifetime and maximize the performance of the installation, preserving its environmental features. All in all the agreement will bring economic benefits to the customer and more accurate financial predictability.

Westerlund says that it is very important that the vessel's engines are properly maintained and that the agreement works. If the vessel was out of service, e.g. for a week, the financial impact for Viking Line would be enormous.

When asked how Wärtsilä's people have performed, Westerlund replies:

– Quite well, I have to say. Cooperation has run very smoothly with the contact person

| Challenges  | Solution  | Benefits   |
|---|---|--|
| <ul style="list-style-type: none"> <li>– Providing necessary maintenance and spare parts for the LNG fuelled vessel</li> <li>– Ensuring a trouble-free operation</li> </ul> | <ul style="list-style-type: none"> <li>– A five-year maintenance agreement including all normal maintenance, such as overhauls for two of the engines, and all the necessary spare parts for all four engines, according to the engine maintenance manual.</li> </ul> | <ul style="list-style-type: none"> <li>– Operational reliability</li> <li>– Better predictability of service costs</li> <li>– Clear savings in maintenance costs, thanks to the dynamic maintenance planning</li> <li>– Enhanced spare parts availability</li> </ul> |

from Wärtsilä. Concerning the agreement, we get all the help we need. Our engine crew is in contact with the responsible service engineer on a continuous basis.

Westerlund describes the agreement period as having been fairly trouble-free. However, there have been some minor discussions about what is covered within the scope of warranty and what is in the maintenance agreement. Although this has now been solved, Westerlund says that the use of spare parts, for example, needs to be clarified in the scope of agreement when discussions on a possible extension of the agreement begin.

## AN INVESTMENT THAT GENERATES BENEFITS

Viking Line has so far had good experiences with the maintenance agreement; Westerlund mentions the availability of spare parts when needed as being the most important benefit. But he also emphasises the importance of having a good contact person for service-related matters.

Joacim Westerlund sees clear benefits with dynamic maintenance planning.

– After visual inspections on some cylinders, we have been able to prolong the maintenance intervals compared to what it says in the engine manual. If we can postpone the maintenance from 20,000 running hours to 24,000 hours, that means clear savings for us in maintenance costs.

According to Westerlund, Wärtsilä shows great understanding and support for Viking Line's business and he does not hesitate to recommend Wärtsilä's maintenance agreement.

– Yes I do, especially concerning this new LNG-technology. For more traditional engine technology, at least we have the knowledge and skills in-house, but when it comes to new technologies, such as LNG, I really recommend a maintenance agreement. In the beginning, I was a little hesitant about whether we should invest in this agreement. But now, I would say that it was worth every single euro, concludes Joacim Westerlund.