

# How are Superyacht Engineering Departments Structured?

Engineering departments vary widely according to the type, size, and usage of the yacht in question. But, most large yachts will have some or all of the following roles on board. [Wilson Halligan](#) share with us how Superyacht engineering departments are structured on board:



## **Chief Engineer (or Sole Engineer on smaller yachts with only one engineer)**

The Chief Engineer is in overall command of all Engineering operations on board. They're the senior advisor to the Captain on all matters related to the condition and serviceability of the yacht's engines, propulsion, ancillaries, and hotel systems. Although, Captains always retain supreme responsibility for the safety of the vessel, the best ones will work very closely with their Chief Engineer and take note of any advice and requests they make. After all, they are highly trained, experienced, and knowledgeable subject matter experts.

Chief Engineers are responsible for ensuring that the Yacht is in all respects compliant with the relevant laws and regulations governing the serviceability of the systems and equipment. They are pivotal in ensuring the yacht passes any relevant flag state, port state, or P&I club surveys and

inspections.

## **1<sup>st</sup> Engineer**

Some of the very largest yachts afloat employ a 1<sup>st</sup> Engineer similar to those employed on Cruise Ships. A 1<sup>st</sup> Engineer takes operational (day to day) command of the engineering team. They do this by supervising engineering tasks and allocating work as appropriate. This allows the Chief Engineer to concentrate on a large amount of paperwork and business management necessary on board a very large yacht.

## **2<sup>nd</sup> Engineer**

The more common understudy to the Chief Engineer, the 2<sup>nd</sup> Engineer often has responsibility for Engine Room maintenance. And, will certainly take on many of the more challenging maintenance and repair tasks as required. The 2<sup>nd</sup> Engineer acts as a supervisor for the more junior crew. And in some cases will be able to deputise for the Chief Engineer if required.

## **3<sup>rd</sup> Engineer**

The 3<sup>rd</sup> Engineer will have specific duties. These duties may include maintenance of the ship's lifeboats, tenders, jet skis, toys, and deck equipment like winches, davits, and hatchways. Very often 3<sup>rd</sup>s are responsible for interior maintenance. Likewise, areas of responsibility vary from yacht to yacht. 3<sup>rd</sup> Engineers will often focus on gaining the requisite experience and 'sea time' to then progress to the position of 2<sup>nd</sup> Engineer.

## **4<sup>th</sup> Engineer**

The most junior engineering officer on board. The 4<sup>th</sup> is very often new to Marine Engineering and is learning the trade. Typically, 4th Engineers are involved in structured educational programs. Or, at least splitting their time between phases at sea learning on the job with phases ashore attending courses. Similarly, this can vary widely across the industry.

## **Motorman**

A junior, but certainly important role found almost exclusively on large yachts in excess of around 100m. The motorman (not gender-specific!) is responsible for the operation and basic maintenance of the yachts' main engines and engine room systems. As well as this, they may assist in starting and stopping large engines and generators, operating switch panels under the supervision of an officer or senior engineer, and reporting anything unusual. Engine room cleanliness and order will be an important part of the role.

## **Wiper / Oiler**

On the largest yachts, especially those operating medium speed diesel or older conventional ship propulsion technology, a wiper, and oiler may be employed in addition to the above with a focused role in keeping engines and machinery spaces clean, keeping greased bearings fed, or keeping open rockers oiled. Because of this, an ability to access confined spaces is often useful. Also, a keen eye for cleanliness in bilges and bunded tanks, etc is often a must.



Image by Superyachts UK

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