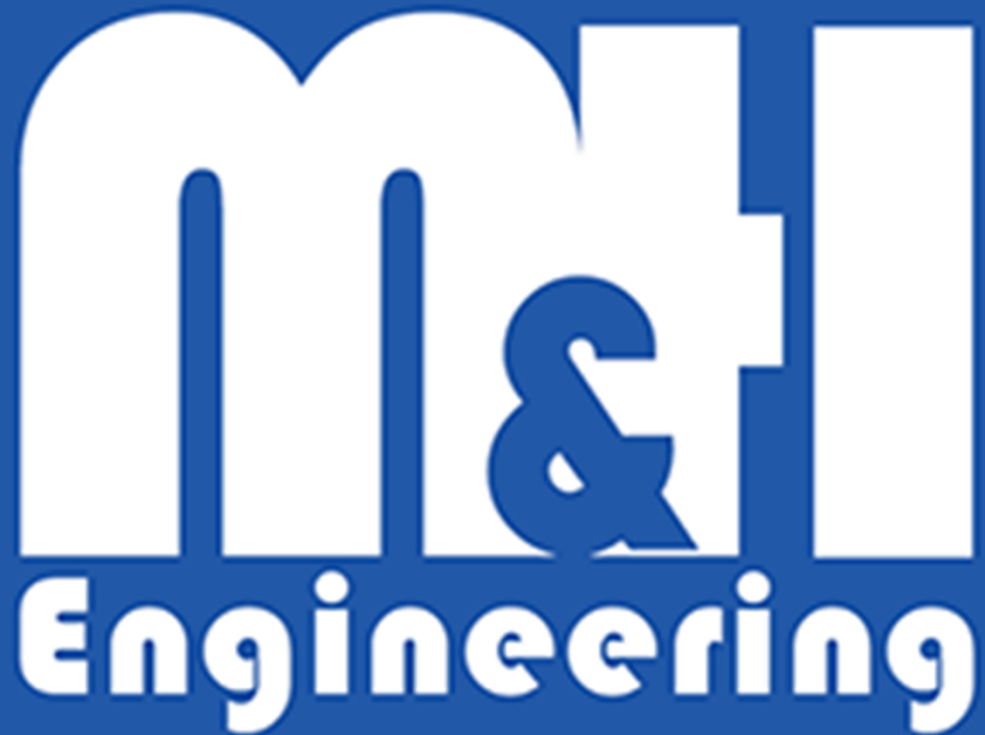


Presentation
by:
Barry McCooley

EPA Certified
Tier 4 Marine
Engines

The logo for M&H Engineering is displayed on a blue rectangular background. The letters 'm', 'h', and '&' are rendered in a large, white, rounded, sans-serif font. Below this, the word 'Engineering' is written in a smaller, white, bold, sans-serif font.

m&h
Engineering

Reduced Emissions.

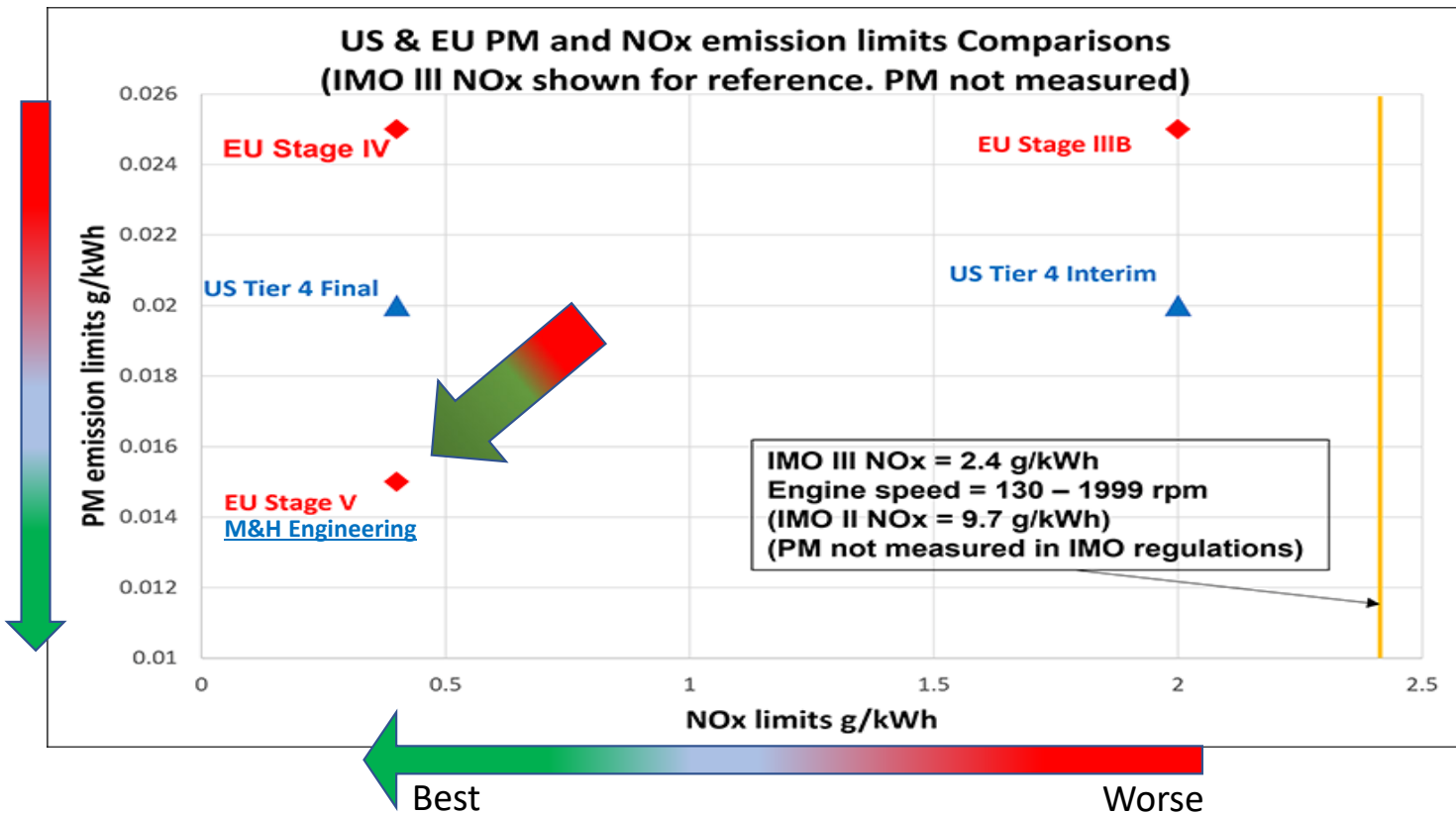
M&H Engines are certified to EU Stage-V and US Tier 4 emissions levels, they exceed IMOIII standard.

M&H Engineering engines are designed to meet or exceed **all present and future marine emission regulations** globally.

55-317kW in phase 1 in 2022.

350-680kW phase 2 in 2023.

For propulsion, generator and auxiliary applications. Sea water cooled, keel cooled and radiator options.



Refit or New Builds.

Designed as a re-fit engine package to replace present engine range fitted to vessels. Ideal for Commercial Passenger Fishing Vessels that are wooden or fibreglass construction. Excursions vessels where weight is critical.

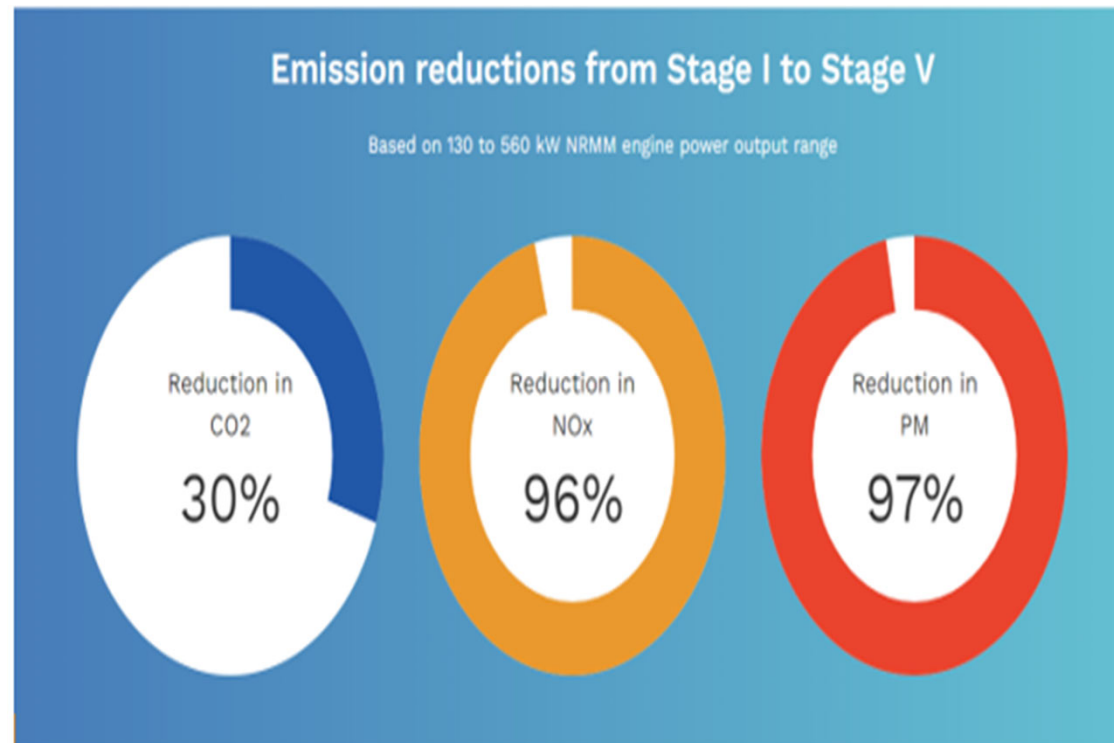
Similar engine layout and configuration to existing marine engines. Easy to install with 12/24 volt options.

Front PTO options available for hydraulics or generator.

Designed to operate at sea safely without compromising the vessel or handling.

Higher torque at lower RPM, full loading at all speeds. Lower fuel consumption.

Simple and straightforward servicing requirements.



After Treatment.

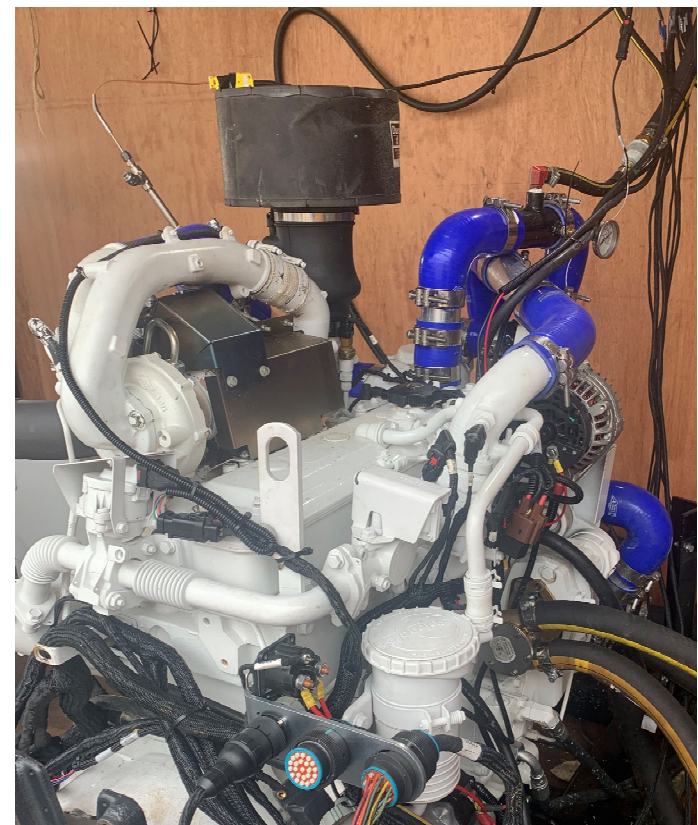
Aftertreatment can be behind the engine or remotely mounted if required, or in different void space or on deck.

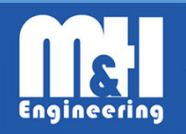
Packaged and protected. [No hot surface temperatures.](#)

The aftertreatment will not cause high temperatures in the engine room, can pass through wooden, fibreglass and aluminium bulkheads safely and correctly.

Integrated and compact aftertreatment package that is the size of 2 x 25litre drums on the 9 litre engine. Lighter weights that retro-fit systems.

We also have these engines as Hazardous Area engines for the petrochemical barges and Hazardous Applications.





Why M&H Engineering.

We believe that we have designed an engine package that can be fitted to all types of vessels without compromising the vessel in weight or stability.

Can be used as dry exhaust system when this suits or as a water cooled insulated exhaust replacing existing wet exhaust, with a mixer at the discharge point.

Small integrated after treatment package that is highly reliable. With an engine that has proven reliability when compared to other competitors' solutions.

Built on a time proven base engine that has good service and local support networks already established.





Engine Power Range.

M&H engines can use the full power and torque curve, allowing the engine to deliver full power at lower rpm and reducing the need for deep reduction gearboxes, thus give significant fuel cost savings. These engines are more efficient than the previous engines.

Confirmed Power Range, delivery Q3 2022.

4.5 Litre T₄ / Stage-V from 55kW to 129kW @2400rpm. Open to take orders.

6.8 Litre T₄ / Stage-V from 104kW to 224kW @2400rpm. Open to take orders.

9 Litre T₄ / Stage-V from 250kW to 317kW @ 2200rpm. Open to take orders.

In Development 2022, to be confirmed. Expected delivery Q3 2023

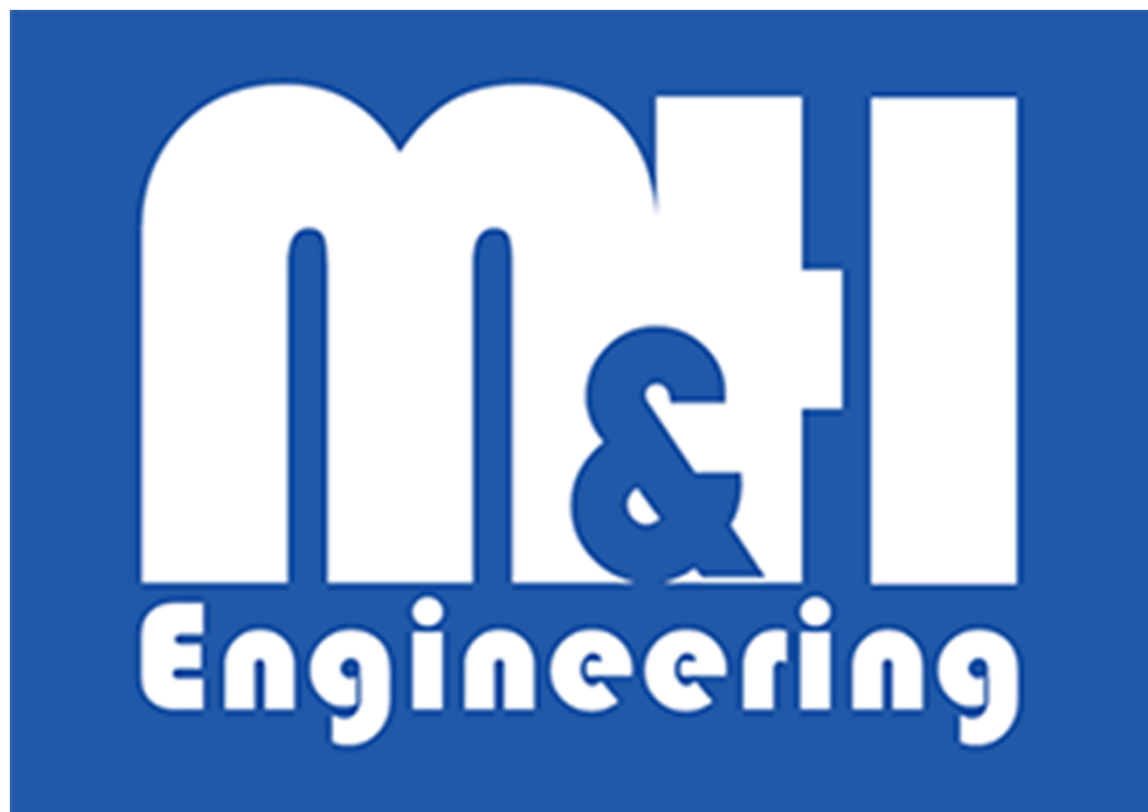
14 Litre T₄/Stage-V from 300kW to 510kW @ 2100rpm

18 Litre T₄ / Stage-V from 513kW to 680kW @ 1900rpm*

* TBC



M&H Stage-V Marine Engines



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