

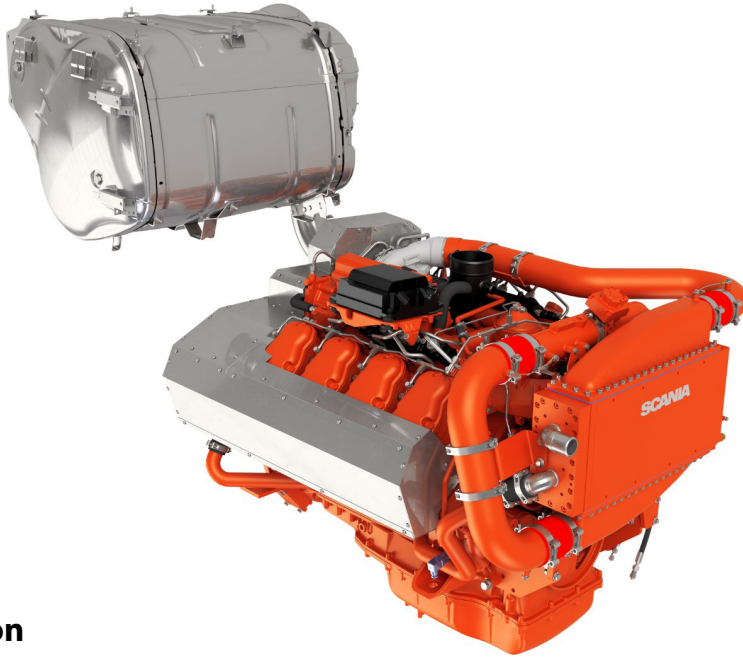
# SEMPER FI DRY CARGO INLAND VESSEL

*Updating the world's first hybrid container barge with Stage V Scania engines*

*Veth Propulsion by Twin Disc first partnered with Wilco Ooms a decade ago on the Semper Fi, a fuel-saving, low-emission inland vessel. Now we're the logical choice to bring the Semper Fi into a new era of sustainability.*



<b>Fleet:</b>	Carpe Diem Inland Shipping
<b>Shipyard:</b>	
<b>Designer:</b>	Veth Propulsion
<b>Integrator:</b>	Veth Propulsion
<b>Propulsion:</b>	Veth Propulsion
<b>Location:</b>	Alblasserdam, The Netherlands



## Situation

The Semper Fi, described as the world's first hybrid container barge, was designed for sustainability as well as profitable functionality. It launched with two Veth Hybrid Drives, two Scania 512 kW propulsion engines and two Scania 634 kVA generator sets from Veth to use less fuel, cut emissions and carry more cargo with a smaller draught. However, technology and regulations have changed since the Semper Fi was commissioned in 2012.

## Implication/Problem

With emissions standards growing ever stricter, and Carpe Diem's continuing desire to be a sustainability leader, it was time to replace the Semper Fi's CCNR-2 engines.

## Solution

Veth Propulsion, a leading Scania dealer, refit the Semper Fi with Veth's first installation of the new Scania DC16 EU Stage V engines and a new after-treatment system, connecting them to the existing exhaust system

The Semper Fi's original forward-thinking design made installation easy. With thrusters aft, and efficient, compact rudder propellers, there's room for change as needed. "We continue to think modularly about how the ship is powered and are positioned to make further strides in the future, precisely because we chose hybrid," says Wilco Ooms.

## Results

The low-nitrogen oxides (Nox) EU Stage V engine not only meets emission level regulations, but also reduces fuel consumption to minimize operating cost as well as environmental impact. The engine range also offers impressive torque and engine response, for more agile performance.

That means the Semper Fi can maintain its Green Award gold-level certification. And thanks to the partnership with Veth Propulsion, the vessel can be adapted for even greater sustainability.

## Scania benefits

- Power range of 162 kW (220 hp) to 552 kW (750 hp) at 1,800 rpm
- Advanced automotive technology
- Maintenance friendly with separate cylinder heads
- Compact motor to reduce space used
- Low fuel and oil consumption
- Meet CCNR2 IMO-2 emission requirements
- Short delivery times
- 24/7 service through 1,500 service outlets in 100 countries
- xtensive stock of parts
- Available in 5 cylinder in-line engine (9 litre), 6 cylinder in-line engine (13 litre) and V8 (16 litre)
- The aftertreatment system is an original Scania product. It is very compact and is controlled by the engine electronics for an optimal cooperation of the system between exhaust gas

*"This puts us back in the lead and enables us to remain a reliable transport partner, even as changing weather conditions increase the frequency of low water."*

**Wilco Ooms**

**Managing Director  
Carpe Diem Shipping**