



# MD97 – what is it?

Methanol with 3% additive for lubrication and ignition improvement gives the fuel diesel like properties. - It becomes a superb fuel for compression ignition, we named this “MD97”, analogous to land-based ethanol fuel “ED95”.

- ✓ **Engine technology:** Compression ignited (CI) alcohol engine is alcohol combustion in a diesel process. The technology is well proven and gives the same feeling and experience as a traditional diesel engine. It is powerful from low speed and high torque is always available.
- ✓ **Efficiency:** The CI stands out with high efficiency, especially at low- part load. The engine does not suffer from throttle effects, which is the case for spark ignited engines. CI process utilizes all fuel in the combustion with minimum unburnt fuel as a result.
- ✓ **Emissions:** No Sulphur oxides and almost no PM are produced. NOx is reduced by 50-70% compared to diesel fueled equivalent. Methanol is bio-degradable, spillage of methanol is therefore harmless to marine life.
- ✓ **Maintenance:** In a diesel process the fuel is combusted in the cylinder with minimum contact to the engine's internal parts. Fuel slip to the lubrication oil is therefore almost non-existing. Maintenance is comparable to a normal diesel fueled engine.
- ✓ **Installation:** Compression ignition allows for a 2-pole electrical system. Engine block is not grounded to the battery. Aftertreatment is not needed to meet tough marine emissions requirements. This saves cost, space and maintenance. All together the CI methanol engine is highly suitable for a marine installation.

