

# 2-Stroke Propulsion

## Diesel Engine Performance Report



The fuel oil bill is the single largest expense operational-wise, consequently it makes good sense to monitor and optimize the engine performance.

### Performance

During the last few years slow steaming has become the norm within the shipping industry, which is mainly driven by supply and demand. Although slow steaming has a huge impact on the fuel oil consumption it still makes good sense to monitor the main engine performance, as a fuel oil saving of even a few gr/kWh adds up.

Proper adjustment of the main engine and balancing of the cylinders does not only benefit the specific fuel oil consumption and daily running cost but also the component lifetime and time between overhaul is usually increased too.

FORCE Technology offers to check the performance data of your vessel on a monthly basis including comments and recommendations in close dialogue with you as a Superintendent or Fleet Manager.

The performance evaluation in combination with collection of various wear data, monitoring and visual inspections will enhance the overall engine performance as e.g. the specific lub. oil consumption can be optimized too. A 0,1 gr/kWh feed rate reduction "converted" to heavy fuel oil corresponds to 1 gr/kWh, so there is a huge saving potential.

# 2-Stroke Propulsion Performance Report



Vessel name		Engine type			Report number			Date, dd-mm-yyyy							
Performance test duration, hh-mm		Torsion meter, kW			Engine revolutions, rpm			Fuel oil consumption, tons							
<b>Main Engine</b>															
	Cyl. 1	Cyl. 2	Cyl. 3	Cyl. 4	Cyl. 5	Cyl. 6	Cyl. 7	Cyl. 8	Cyl. 9	Cyl. 10	Cyl. 11	Cyl. 12	Cyl. 13	Cyl. 14	Average
Mean indicated pressure, bar															
Compression pressure, bar															
Maximum pressure, bar															
Exhaust gas temperature, °C															
Fuel pump index															
Fuel pump VIT index															
Cooling water outlet, °C															
Piston cooling outlet, °C															
<b>Turbo Chargers and Scavenge Air System</b>															
Turbocharger maker					Turbocharger type				Scavenge air pressure, mm Hg or bar		Barometric pressure, mm Hg or mbar				
	Turbocharger revolutions, rpm	Blower inlet temperature, °C	Exh. gas pressure before turbine, mm Hg or bar	Exh. gas pressure after turbine, mm Hg or bar	Air temp. after compressor, °C	Air temp. after cooler, °C	Pressure drop air filter Δ P, mm wg	Pressure drop air cooler Δ P, mm wg	Cooling water pressure drop Δ P, bar						
1.															
2.															
3.															
4.															
<b>Fuel Oil System</b>															
Pressure before filter, bar	Pressure after filter, bar	Viscosity after pre-heater, cSt	Temp after pre-heater, °C	Density at 15 °C, kg/m <sup>3</sup>	Water at engine, %	Flow meter reading start	Flow meter reading stop	Fuel oil temp. at flow meter, °C	Specific fuel oil consumption, g/kWh						
<b>Lub. Oil System</b>					<b>Fresh Water - Cooling Water System</b>										
Pressure before filter, bar	Pressure after filter, bar	Pressure inlet engine, bar	Temperature before cooler, °C	Temperature inlet engine, °C	Pressure pump outlet, bar	Engine inlet, bar	Temperature pump outlet, °C	LT system, °C	Engine inlet, °C						
<b>Piston Cooling</b>					<b>Sea Water - Cooling Water System</b>										
Pressure before cooler, bar	Engine inlet, bar	Temperature before cooler, °C	Engine inlet, °C	Sea water temperature, °C	Pressure pump outlet, bar	Temperature after oil cooler, °C	Temperature after LT cooler, °C								
<p style="text-align: center;">_____</p> <p style="text-align: center;">Date <span style="margin-left: 200px;">Signature - Chief Engineer</span></p>															

**Further information**

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