The marine engines from Scania are based on a robust design with a strength optimised cylinder block containing wet cylinder liners that can easily be exchanged. Individual cylinder heads with 4 valves per cylinder promotes repairability and fuel economy. The engines are type approved in all major classification societies.

The engine is equipped with a Scania developed Engine Management System, EMS, in order to ensure the control of all aspects related to engine performance. The injection system is based on electronically controlled unit injectors that gives low exhaust emissions with good fuel economy and a high torque already at low revs.

The engine can be fitted with many accessories such as air cleaners, PTOs, transmissions and type approved instrumentation in order to suit a variety of installations.

### Standard equipment
- Scania Engine Management System, EMS
- Unit injectors, PDE
- Turbocharger
- Fuel pre-filter with water separator
- Fuel filter
- Oil filter, full flow
- Centrifugal oil cleaner
- Oil cooler, integrated in block
- Oil filler, in engine block
- Oil dipstick, in block
- Starter, 2-pole 7.0 kW
- Alternator, 2-pole 100A
- Flywheel SAE 14
- Silumin flywheel housing, SAE 1 flange
- Front-mounted engine brackets
- Protection covers
- Closed crankcase ventilation
- Operator’s manual

### Engines with heat exchanger:
- Sea water pump
- Heat exchanger with expansion tank

### Optional equipment
- Hydraulic pump
- Side-mounted PTO
- Front-mounted PTO
- Exhaust connections
- Electrical base system
- Control and instrument panels
- Accelerator position sensor
- Engine heater
- Power pack engine bracket
- Stiff rubber suspension
- Air cleaner
- Studs in flywheel housing
- Reversible fuel filter
- Low coolant level reaction
- Variable idle speed setting
- Low and extra low oil sump
- Long oil dipstick
- Oil level sensor
- Bilge pump

---

**DI13 083M. 405 kW (550 hp)**
**US Tier 3**

<table>
<thead>
<tr>
<th><strong>Rating</strong></th>
<th><strong>Engine speed (rpm)</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>1200</td>
<td>1500</td>
</tr>
<tr>
<td>Gross power, full load (kW)</td>
<td>IFN</td>
</tr>
<tr>
<td>Gross power, full load (hp, metric)</td>
<td>IFN</td>
</tr>
<tr>
<td>Gross power, propeller curve (kW)</td>
<td>IFN</td>
</tr>
<tr>
<td>Gross power, propeller curve (hp, metric)</td>
<td>IFN</td>
</tr>
<tr>
<td>Gross torque (Nm)</td>
<td>IFN</td>
</tr>
<tr>
<td>Spec fuel consumption. Full load (g/kWh)</td>
<td>IFN</td>
</tr>
<tr>
<td>Spec fuel consumption. 3/4 load (g/kWh)</td>
<td>IFN</td>
</tr>
<tr>
<td>Spec fuel consumption. 1/2 load (g/kWh)</td>
<td>IFN</td>
</tr>
<tr>
<td>Spec fuel consumption. Propeller curve (l/h)</td>
<td>IFN</td>
</tr>
<tr>
<td>Optimum fuel consumption (g/kWh)</td>
<td>IFN</td>
</tr>
<tr>
<td>Heat rejection to coolant (kW)</td>
<td>IFN</td>
</tr>
</tbody>
</table>

**IFN – Intermittent service:** Intended for intermittent use where rated power is available 1 h/3 h. Accumulated load factor must not exceed 80% of rated power. Unlimited h/year service time.
DI13 083M. 405 kW (550 hp)
US Tier 3

Engine description
- No of cylinders: 6 in-line
- Working principle: 4-stroke
- Firing order: 1 - 5 - 3 - 6 - 2 - 4
- Displacement: 12.7 litres
- Bore x stroke: 130 x 160 mm
- Compression ratio: 17.3:1
- Weight (excl oil and coolant): 1285 kg (Engine with heat exchanger)
- Piston speed at 1500 rpm: 8.0 m/s
- Piston speed at 1800 rpm: 9.6 m/s
- Camshaft: High position alloy steel
- Pistons: Steel pistons
- Connection rods: I-section press forgings of alloy steel
- Crankshaft: Alloy steel with hardened and polished bearing surfaces
- Oil capacity: 28-34 dm³ (standard oil sump)
- Electrical system: 2-pole 24V

Output

<table>
<thead>
<tr>
<th>RPM</th>
<th>kW</th>
</tr>
</thead>
<tbody>
<tr>
<td>1500</td>
<td>345</td>
</tr>
<tr>
<td>1800</td>
<td>385</td>
</tr>
<tr>
<td>2100</td>
<td>405</td>
</tr>
</tbody>
</table>

Torque

<table>
<thead>
<tr>
<th>RPM</th>
<th>kpm</th>
</tr>
</thead>
<tbody>
<tr>
<td>1500</td>
<td>130</td>
</tr>
<tr>
<td>1800</td>
<td>150</td>
</tr>
<tr>
<td>2100</td>
<td>170</td>
</tr>
</tbody>
</table>

Spec fuel consumption

<table>
<thead>
<tr>
<th>RPM</th>
<th>g/kWh</th>
</tr>
</thead>
<tbody>
<tr>
<td>1500</td>
<td>210</td>
</tr>
<tr>
<td>1800</td>
<td>190</td>
</tr>
<tr>
<td>2100</td>
<td>170</td>
</tr>
</tbody>
</table>

Test conditions: Air temperature +25°C, Barometric pressure 101.3 kPa (760 mmHg), Humidity 30%. Diesel fuel acc. to ECE R 24 Annex 6. Density of fuel 0.840 kg/dm³. Viscosity of fuel 3.0 cSt at 40°C. Energy value 42,700 kJ/kg.

Power test code ISO 3046. Power and fuel values +/-3%. Edition 02 © Scania CV AB, SE-151 87 Södertälje, Sweden

Engine with heat exchanger

All dimensions in mm

SE 151 87 Södertälje, Sweden
Telephone +46 8 553 810 00
Telefax +46 8 553 829 93
www.scania.com
genes@scania.com