The industrial 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 reparability and fuel economy.

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 give low exhaust emissions with good fuel economy and a high torque. The engine can be fitted with many accessories such as air cleaners, PTOs and flywheels in order to suit a variety of installations.

### DC09 074A. 294 kW (400 hp)
EU Stage II, China Phase II and Russia Stage I

**Standard equipment**
- Scania Engine Management System, EMS
- Unit injectors, PDE
- Turbocharger
- Saver ring in cylinder liner
- Fuel filter and extra pre-filter with water separator
- Oil filter, full flow
- Centrifugal oil cleaner
- Oil cooler, integrated in cylinder block
- Oil filler, in valve cover
- Deep front oil sump
- Oil dipstick, in cylinder block
- Magnetic drain plug for oil draining
- Starter motor, 1-pole 6.0 kW
- Alternator, 1-pole 100 A
- Flywheel, for use with friction clutch
- Silumin flywheel housing, SAE 1 flange
- Front mounted engine suspension
- Open crankcase ventilation

**Optional equipment**
- Cooling package
- Pulver and pusher fans
- Fan ring with sealing
- Hydraulic pump
- Air compressor
- AC compressor
- Side-mounted PTO
- Front-mounted PTO
- Exhaust connections
- Engine heater
- Flywheels SAE11.5”, SAE14”, DANA15/16”, DANA17” flexplate, ZF WG260
- Stiff rubber engine suspension
- Air cleaner
- Closed crankcase ventilation
- Studs in flywheel housing
- External thermostat for extra oil cooler
- Coolant level sensor
- Oil level sensor
- Low oil sump

<table>
<thead>
<tr>
<th>Engine speed (rpm)</th>
<th>1200</th>
<th>1500</th>
<th>1800</th>
<th>2100</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gross power (kW)</td>
<td>230</td>
<td>282</td>
<td>294</td>
<td>294</td>
</tr>
<tr>
<td>Gross power (hp)</td>
<td>313</td>
<td>384</td>
<td>400</td>
<td>400</td>
</tr>
<tr>
<td>Gross torque (Nm)</td>
<td>1830</td>
<td>1795</td>
<td>1560</td>
<td>1337</td>
</tr>
<tr>
<td>Spec fuel consumption. Full load (g/kWh)</td>
<td>199</td>
<td>204</td>
<td>209</td>
<td>221</td>
</tr>
<tr>
<td>Spec fuel consumption. 3/4 load (g/kWh)</td>
<td>197</td>
<td>195</td>
<td>205</td>
<td>223</td>
</tr>
<tr>
<td>Spec fuel consumption. 1/2 load (g/kWh)</td>
<td>195</td>
<td>199</td>
<td>210</td>
<td>238</td>
</tr>
<tr>
<td>Heat rejection to coolant (kW)</td>
<td>94</td>
<td>104</td>
<td>108</td>
<td>117</td>
</tr>
</tbody>
</table>

**Rating: IFN – Intermittent service**: Rated output available 1/6 h.
Unlimited h/year service time at a load factor of 80%
**DC09 074A. 294 kW (400 hp)**

EU Stage II, China Phase II and Russia Stage I

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### Engine description

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>No of cylinders</td>
<td>5 in-line</td>
</tr>
<tr>
<td>Working principle</td>
<td>4-stroke</td>
</tr>
<tr>
<td>Firing order</td>
<td>1 - 2 - 4 - 5 - 3</td>
</tr>
<tr>
<td>Displacement</td>
<td>9.3 litres</td>
</tr>
<tr>
<td>Bore x stroke</td>
<td>130 x 140 mm</td>
</tr>
<tr>
<td>Compression ratio</td>
<td>16:1</td>
</tr>
<tr>
<td>Weight</td>
<td>950 kg (excl oil and coolant)</td>
</tr>
<tr>
<td>Piston speed at 1500 rpm</td>
<td>7.0 m/s</td>
</tr>
<tr>
<td>Piston speed at 1800 rpm</td>
<td>8.4 m/s</td>
</tr>
<tr>
<td>Camshaft</td>
<td>High position alloy steel</td>
</tr>
<tr>
<td>Pistons</td>
<td>Aluminium pistons</td>
</tr>
<tr>
<td>Connection rods</td>
<td>I-section press forgings of alloy steel</td>
</tr>
<tr>
<td>Crankshaft</td>
<td>Alloy steel with hardened</td>
</tr>
<tr>
<td></td>
<td>and polished bearing surfaces</td>
</tr>
<tr>
<td>Oil capacity</td>
<td>32-38 dm³</td>
</tr>
<tr>
<td>Electrical system</td>
<td>1-pole 24V</td>
</tr>
</tbody>
</table>

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### Output

![Graph of output in kW and hp](image1)

### Torque

![Graph of torque in Nm and rpm](image2)

### Spec fuel consumption

![Graph of specific fuel consumption in g/kWh and g/hph](image3)

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**Test conditions**

- Air temperature: +25°C
- Barometric pressure: 100 kPa (750 mmHg)
- Humidity: 30%
- Diesel fuel acc. to DIN EN 590
- Viscosity of fuel: 3.8 cSt at 40°C
- Energy value: 42,700 kJ/kg

**Power test code**: ISO 3066. Power and fuel values ± 3%.