DC16 076A. 425 kW (578 hp)
China Phase III and India Bharat Stage III

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

### Standard equipment
- Scania Engine Management System, EMS
- Unit injectors, PDE
- Turbocharger
- Fuel filter and extra pre-filter with water separator
- Oil filter, full flow
- Centrifugal oil cleaner
- Oil cooler, integrated in block
- Oil filler, in valve cover
- Deep front oil sump
- Oil dipstick, in block
- Magnetic drain plug for oil draining
- Starter, 1-pole 7.0 kW
- Alternator, 1-pole 100A
- Flywheel, for use with friction clutch
- Silumin flywheel housing, SAE 1 flange
- Front mounted engine brackets
- Open crankcase ventilation
- Operator’s manual

### Optional equipment
- Prepared for cooling package
- Puller and pusher fans
- Fan ring with sealing
- Hydraulic pump
- Air compressor
- AC compressor
- Side-mounted PTO
- Front-mounted PTO
- Exhaust connections
- Electrical base system
- Control and instrument panels
- Accelerator position sensor
- Engine heater
- Flywheel: SAE14"
- Stiff rubber engine suspension
- Air cleaner
- Closed crankcase ventilation
- Studs in flywheel housing
- External thermostat for extra oil cooler
- Low coolant level reaction
- Variable idle level reaction
- Low oil sump

### Engine speed (rpm)

<table>
<thead>
<tr>
<th>Rating</th>
<th>1200</th>
<th>1500</th>
<th>1800</th>
<th>1900</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gross power (kW)</td>
<td>IFN</td>
<td>280</td>
<td>383</td>
<td>425</td>
</tr>
<tr>
<td>Gross power (hp, metric)</td>
<td>IFN</td>
<td>381</td>
<td>521</td>
<td>578</td>
</tr>
<tr>
<td>Gross torque (Nm)</td>
<td>IFN</td>
<td>2230</td>
<td>2440</td>
<td>2255</td>
</tr>
<tr>
<td>Spec fuel consumption. Full load (g/kWh)</td>
<td></td>
<td>205</td>
<td>203</td>
<td>218</td>
</tr>
<tr>
<td>Spec fuel consumption. 3/4 load (g/kWh)</td>
<td></td>
<td>200</td>
<td>201</td>
<td>216</td>
</tr>
<tr>
<td>Spec fuel consumption. 1/2 load (g/kWh)</td>
<td></td>
<td>201</td>
<td>202</td>
<td>220</td>
</tr>
<tr>
<td>Heat rejection to coolant (kW)</td>
<td></td>
<td>136</td>
<td>144</td>
<td>173</td>
</tr>
</tbody>
</table>

IFN – Intermittent service: Rated output available 1 h/6 hours period. Unlimited h/year service time at a load factor of 80%.

This specification may be revised without notice.
DC16 076A. 425 kW (578 hp)
China Phase III and India Bharat Stage III

Engine description

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>No of cylinders</td>
<td>90° V8</td>
</tr>
<tr>
<td>Working principle</td>
<td>4-stroke</td>
</tr>
<tr>
<td>Firing order</td>
<td>1 - 5 - 4 - 2 - 6 - 3 - 7 - 8</td>
</tr>
<tr>
<td>Displacement</td>
<td>16.4 litres</td>
</tr>
<tr>
<td>Bore x stroke</td>
<td>130 x 154 mm</td>
</tr>
<tr>
<td>Compression ratio</td>
<td>16.7:1</td>
</tr>
<tr>
<td>Weight</td>
<td>1340 kg (excl oil and coolant)</td>
</tr>
<tr>
<td>Piston speed at 1500 rpm</td>
<td>7.7 m/s</td>
</tr>
<tr>
<td>Piston speed at 1800 rpm</td>
<td>9.24 m/s</td>
</tr>
<tr>
<td>Camshaft</td>
<td>High position alloy steel</td>
</tr>
<tr>
<td>Pistons</td>
<td>Steel 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 and polished bearing surfaces</td>
</tr>
<tr>
<td>Oil capacity</td>
<td>35-45 dm³</td>
</tr>
<tr>
<td>Electrical system</td>
<td>1-pole 24V</td>
</tr>
</tbody>
</table>

Test conditions:
- Air temperature: +23°C
- Barometric pressure: 100 kPa (750 mmHg)
- Humidity: 30%
- Diesel fuel acc. to ECE R 24 Annex E
- Density of fuel: 0.840 kg/dm³
- Viscosity of fuel: 3.0 cSt at 40°C
- Energy value: 42,700 kJ/kg