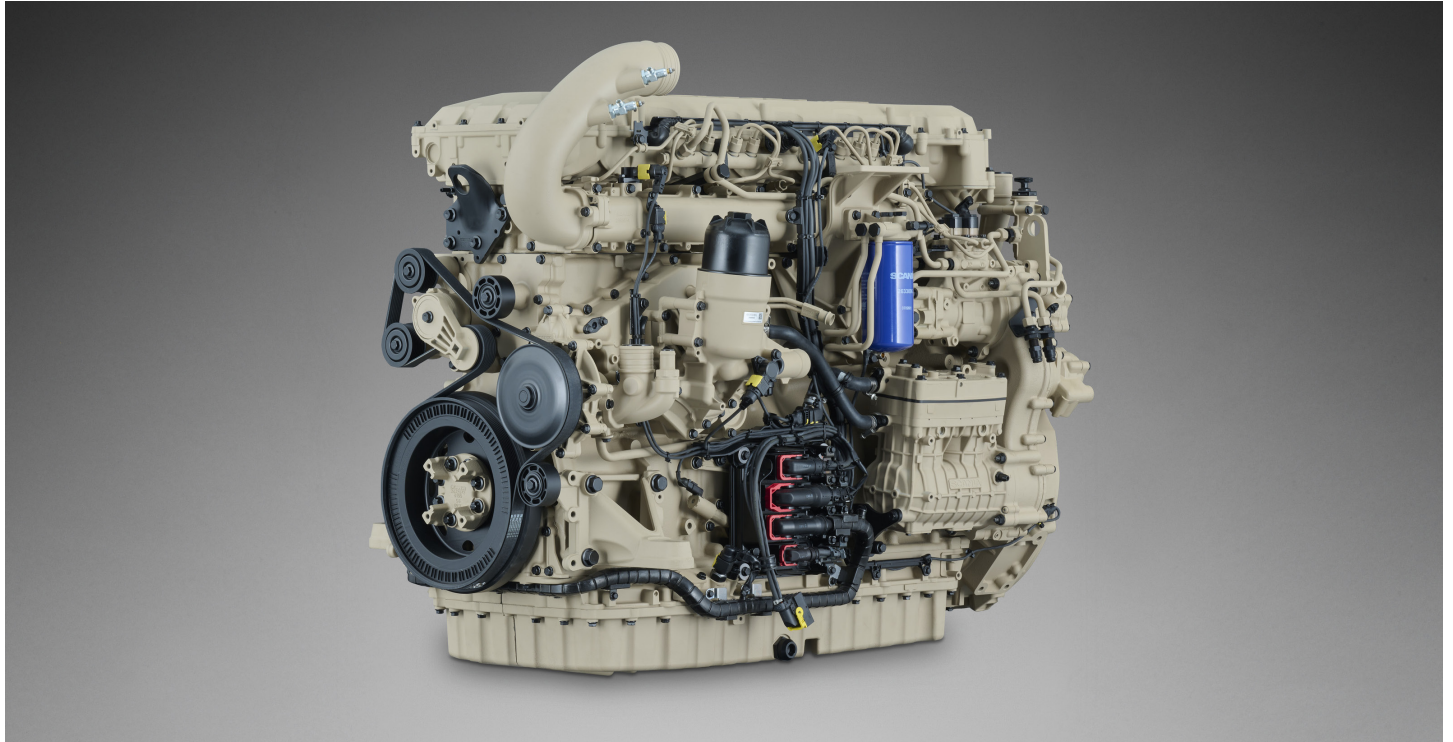


SCANIA HEAVY INDUSTRY SOLUTIONS

# 13-LITRE ENGINE



## Engine description

DC13A. 450/540 kW (612/734 hp)

For Power Solutions, outstanding performance and high uptime are at the core of our business, and still we never compromise with fuel consumption. Scania's engines are compact and easy to install and maintain. Thanks to integrated production with industry-leading quality standards, we can supply both engines and parts with short lead times. Each engine provides leading fuel economy and exceptional torque rating already at low revs. This makes it suitable for support and operational land vehicles, while delivering lean customer operational and sustainment life cycle costs. By utilizing cutting-edge technology as well as proven technologies as a basis for development, our engineers continue to break new ground.

These are some key features of our engines:

- Modular design and support solutions, resulting in maximized uptime
- Global network and support
- High power-to-weight ratio
- Outstanding fuel efficiency
- Compact dimensions
- Full service support of spare parts, documentation, training, repair and maintenance services
- 100% designed and built in-house – uncompromising reliability

Scania can support with engine adaptations, as well as fitted or loose accessories, to suit a variety of installations. With more than 1,800 service workshops all over the world, the availability of professional services, assistance and advice leaves nothing to be desired. A great share of our authorized workshops are ready and accessible 365 days a year, ensuring high uptime. Scania supports the engine during its full life cycle in all heavy industry perspectives.

### Standard equipment

- Scania Engine Management System, EMS
- Extra high pressure fuel injection system, XPI
- Turbocharger
- Engine-mounted fuel filter
- Oil filter, full flow
- Oil cooler, integrated in cylinder block
- 2-pole starter motor, 7 kW (EMS-controlled)
- Belt transmission prepared for alternators up to 600 A
- CAN bus communication
- Cast iron flywheel housing, SAE 1 flange
- Open crankcase ventilation
- Air compressor, 700 CC
- Flame start system in intake manifold

### Optional equipment

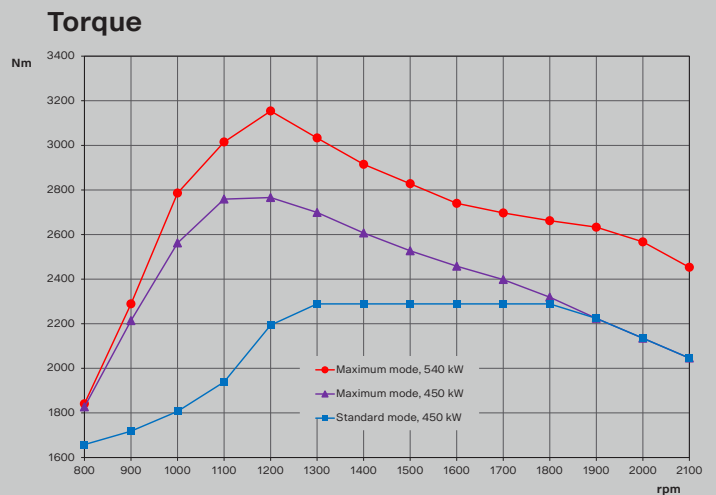
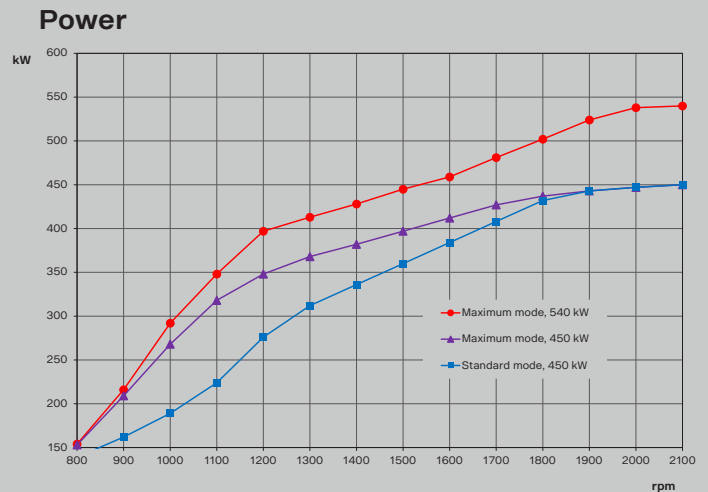
- 2 x hydraulic pump
- AC compressor
- Compression release brake
- Side-mounted power take-off
- Front-mounted power take-off
- Exhaust connections
- Flywheels for different types of applications
- External thermostat
- Pre-filter with water separator and heater, for separate mounting

## 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	19:1
Weight (dry)	1,100 kg
Charging method	Turbocharged, aftercooled
Starting method	Electric
Electrical system	1-pole, 24 V DC
Control method	CAN bus, Scania EMS
Intake system	Charge air cooling
Injection system	Extra high pressure fuel injection, XPI
Max torque	2,766/3,154 Nm
Rated power	450/540 kW
Rated speed	2,100 rpm
Contin. operational angles	Pitch $\pm 60\%$ ; roll $\pm 30\%$
Direction of rotation	Counter clockwise
Cold start	-19°C without preheating system
Oil cooler	Integrated in engine cooling system
Oil capacity	40-45 dm <sup>3</sup>
Standard fuels	EN590
Alternative fuels	F-34 (JP-8), F-44 (JP-5), F-54, F-63, F-75, F-35 with corresponding additives*
Lubrication oil standards	Scania LDF3, ACEA E4/E5/E7*

\*Other types of fuel or oil should be checked for compliance. Additional information is available on request.

## Power charts



**Test conditions.** Air temperature 25°C. Barometric pressure 100 kPa (750 mmHg). Humidity 30%. Diesel fuel acc.to ECE R 24 Annex 6. Density of fuel 0.84 kg/dm<sup>3</sup>. Viscosity of fuel 3.0 cSt at 40°C. Energy value 42,700 kJ/kg. **Power test code** ISO 3046. Power and fuel values  $\pm 3\%$ .

## Dimensions

A Height	1,070
B Overall length	1,370
C Width	880
D Oil sump bottom from centre of crankshaft level	325

All dimensions indicated in mm.

