FACT SHEET

Engine D13A460, EU4SCR

The D13A460 is a 460 hp 12.8-litre in-line, six-cylinder diesel engine equipped with an overhead camshaft, four valves per cylinder and unit injectors. The engine meets the EU exhaust emissions requirements according to the Euro 4 standards.

The D13A460 is designed for heavy long-haul and construction operations. It is based on a robust and dependable design with an overhead camshaft, four valves per cylinder and precisely controlled electronic fuel injection.

The engine is designed for low fuel consumption, good driving properties and high availability. The timing mechanism is located at the rear of the engine, which results in less vibration and permits the fitting of a rear-mounted power take-off.

The D13A460 is a low-emission engine regarding both exhaust gases and noise level. Owing to after-treatment of exhaust emissions with SCR (Selective Catalytic Reduction) technology, the engine is approved to the EU's Euro 4 standards.

The D13A460 is available with VEB+ (Volvo Engine Brake) as an option. This system provides extremely high braking effect, further improving safety and reducing wear on the wheel brakes.

FEATURES AND BENEFITS

- Maximum torque within a broad rev range.
- Fuel-efficient.
- Low-emission variants, Euro 4.
- Oil drain 100.000 km, or once a year, with VDS4.
- Extremely high engine braking effect with VEB+ (option).
- Rear-mounted power take-off with high power output (option).
- Closed crankcase ventilation (option).

FACT SHEET

Engine D13A460, EU4SCR

Efficient combustion for excellent driveability

The D13A is equipped with unit injectors that provide high injection pressure. The combustion chamber and inlet manifold are designed for optimum combustion. The gas-fill ratio is extremely high, which contributes to the high efficiency.

This design creates a fuel-efficient engine with high power and immense torque within a broad rev range. This gives the D13A excellent driveability.

Meets emissions requirements with SCR technology

In order to supplement optimum combustion technique the exhaust gases are after-treated by SCR technology (Selective Catalytic Reduction).

In this process, an additive (AdBlue) is injected into the exhaust gases before they pass through an SCR catalytic converter. There the AdBlue reacts with the nitrogen oxides in a process that significantly reduces emissions.

With this system, the D13A is approved to EU emissions standards according to Euro 4.

Low noise emission at idling

The D13A meets the relevant noise emission requirements. The crankshaft and camshaft feature hydraulic vibration dampers, which minimise noise and vibrations. The pre-injection of the fuel is used to further dampen noise at idling.

Closed crankcase ventilation

The D13A is available with closed crankcase ventilation. The system is known as CCV-C (Crank Case Ventilation – Closed). The crankcase gases in the valve cover are returned to the turbocharger via an oil separator with a centrifuge. The oil mist is separated in the maintenance-free centrifuge system, so there is no need for filter replacements.

Owing to the recycled crankcase gases, this system promotes an extremely clean and environmentally compatible engine.

Timing and power take-off at the rear

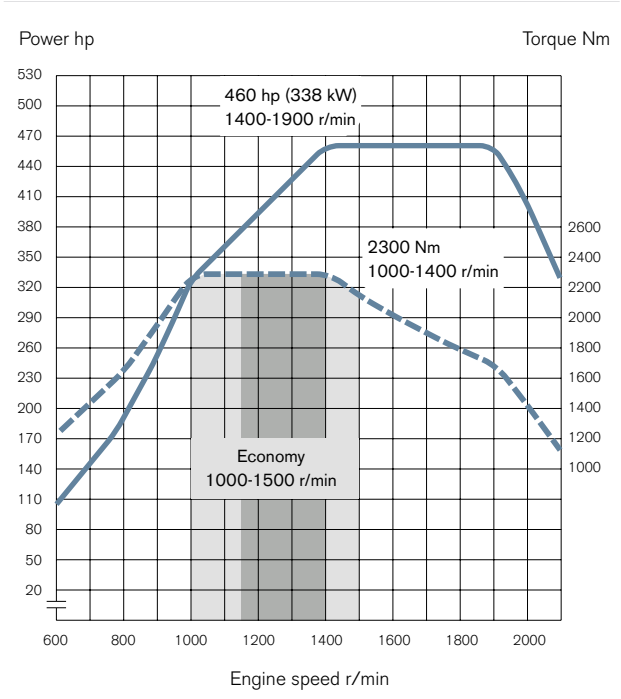
The engine timing mechanism is located at the rear and drives the power steering pump, oil pump, fuel feed pump and air compressor. It is a compact, quiet and thoroughly sealed design that saves weight. With the timing at the rear, the engine's cooling is also improved since the flow of incoming cooling air is not obstructed.

The D13A can be equipped with a power take-off designed for propeller shaft operation or direct-mounted hydraulic pumps. PTO mounting on the engine's flywheel results in a dependable design and permits high torque levels, up to 1000 Nm in continuous operation.

SPECIFICATION

Type designation	D13A460, EU4SCR
Max power output at 1400–1900 rpm	460 hp (338 kW)
Max revs	2100 rpm
Max torque at 1000–1400 rpm	2300 Nm
No. of cylinders	6
Bore	131 mm
Stroke	158 mm
Displacement	12.8 dm^3
Compression ratio	17.8:1
Exhaust brake effect at 2300 rpm	185 kW
Engine braking effect (VEB+) at 2300 rpm*	375 kW
Economy rev range	1000–1500 rpm
Optimum rev range	1150-1400 rpm
Oil-change volume, including oil filter	approx. 33 l
Oil filters	2 full-flow, 1 bypass
Cooling system, total volume	approx. 38 l
Dry weight (base engine)	approx. 1121 kg

* VEB+ available as options.



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