



SCANIA

PRESS info

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A marine engine for tomorrow's demands

Scania is updating the marine engine range with a new 12-litre engine equipped with Scania's unique electronic engine management system, Scania EMS. It is an engine with high performance, low operating costs and low exhaust emissions.

The new engine has been developed using the experience from more than 100 years as marine engine manufacturer as well as from the previous 12-litre marine engine.

"The starting point for the development was our previous 12-litre engine since we and our customers have had very good experience using it over the years," says Mr Lennart Hjelte, Senior Vice President and Head of Scania Industrial & Marine Engines. "Then we added new, and higher, demands on performance, emissions and operating economy."

The most important development is that the new engine is fitted with Scania's own Engine Management System (Scania EMS). It is an electronic system that makes it possible to program each individual engine to meet the customer's specific demands for engine revs and workload, for example.

When running the engine, Scania EMS monitors and processes thousands of pieces of vital data every second. It evaluates the information to adjust injection timing and the amount of fuel injected to ensure optimum combustion and fuel consumption in response to operating conditions.

Controlled engine performance

"The reason for using electronic engine management is to optimise fuel consumption while keeping emissions as low as possible," explains Mr Hjelte. "It makes the engines more complex, but it also makes it possible to manage and control the performance."

Another important function provided by Scania EMS is the possibility to log engine performance. The owner can get information on how the engine has been used, such as power output at a specified engine speed, how long the engine has been running, water temperature and oil pressure during a cycle and so on. The system also reports any problems that might have arisen.

The EMS software is unique for Scania and has been developed in-house. Scania EMS can communicate with other systems via the CAN-bus interface.

Unit injectors

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The DI12M EMS engine is also equipped with unit injectors, one per cylinder. The injection is electronically actuated and the fuel is injected into the combustion chamber under very high pressure. The result is better fuel economy and lower emissions.

“The engine has naturally been developed to comply with all foreseeable future emission regulations,” says Mr Hjelte, “and I am proud to state that the DI12M EMS complies with both the U.S. Tier 2 emission standards and the European Stage 3 rules, which will go into force in 2007.”

P a r t o f t h e S c a n i a f a m i l y

The new marine engine is a part of Scania's modular engine range which means that the 12- and 16-litre diesel engines share several vital engine components such as pistons, connecting rods, cylinder heads, cylinder liners etc.

The advantages with a modular system are obvious. Many components are used in all engine types, which means easier parts handling and distribution. With similar workshop methods, maintenance work will also be more efficient.

“Summarising the Scania DI12M EMS engine, it is based on a tried-and-proven power unit, but with a totally new content,” says Mr Hjelte. “It is an engine produced today for tomorrow's demands.”

Basic data DI12M EMS

Turbocharged, charge-air cooled 4-stroke diesel engine with Scania EMS (Engine Management System) and unit injectors. Four valves per cylinder and individual cylinder heads.

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| Displacement: | 11.7 litres |
| Bore/stroke: | 127 mm/154 mm |
| Weight: | 1130 kg |
| Dimensions: | height 1038 mm, width 870 mm, length 1358 mm |
| Output range: | 294 kW (400hp) – 478 kW (650 hp) |
| Configuration: | 6-in-line |
| Start of production: | Autumn 2004 |

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Scania is one of the world's leading manufacturers of trucks and buses for heavy transport applications, and of industrial and marine engines. With 29,100 employees and production facilities in Europe and Latin America, Scania is one of the most profitable companies in its sector. In 2003, sales totalled SEK 50.5 billion and income after financial items was SEK 4.6 billion. Scania products are marketed in about 100 countries worldwide and some 95 percent of Scania's vehicles are sold outside Sweden.

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