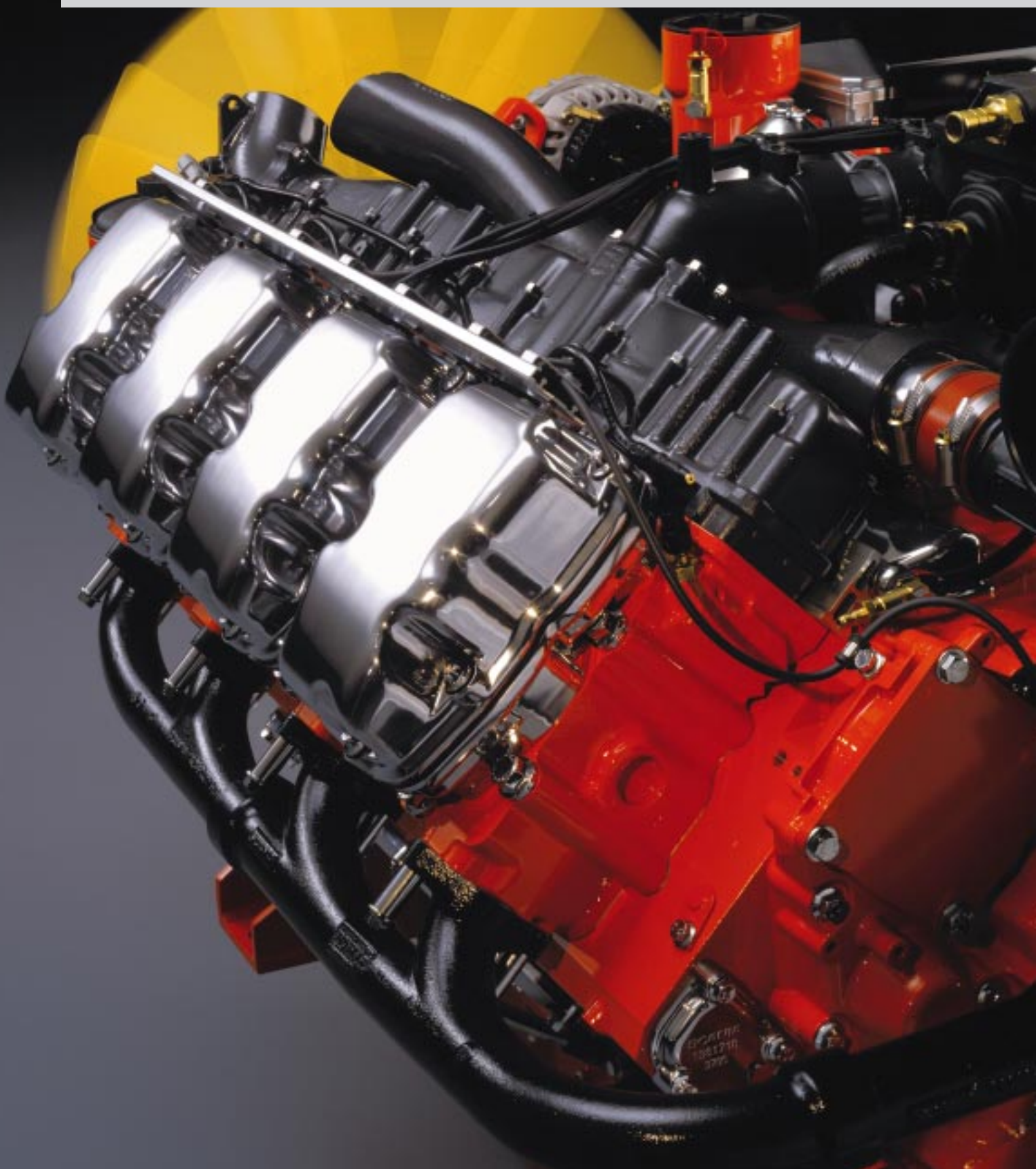
SCANIA

16-LITRE V8 ENGINE

PURE POWER AND PERFORMANCE FOR INDUSTRIAL APPLICATIONS



Impressive power and torque are just part of the picture.

ECONOMY GETS A NEW BOOST

The DC16 is the latest newcomer to the Scania engine family. It is a 16-litre V8 unit with impressive torque right from low revs – an engine for truly tough conditions. Due to its built-in flexibility, it is ideal for a wide variety of applications. And with the focus on Scania's one-man service concept, it is an engine ideal for all machines and vehicles that are serviced on-site.

INDIVIDUALLY TAILORED POWER AND PERFORMANCE

The Scania DC16 is available both for all-speed industrial applications and power generation purposes.

Like all other Scania engines, it offers quick response and maximum torque from low revs. As well as an almost flat torque curve across a broad range of revolutions.

LOW FUEL CONSUMPTION AND LOW EMISSIONS

The DC16 combines high performance with low fuel consumption and low emissions. These are two crucial factors that also reflect two major new features: a new unit injector and a new generation of an electronic engine management system.

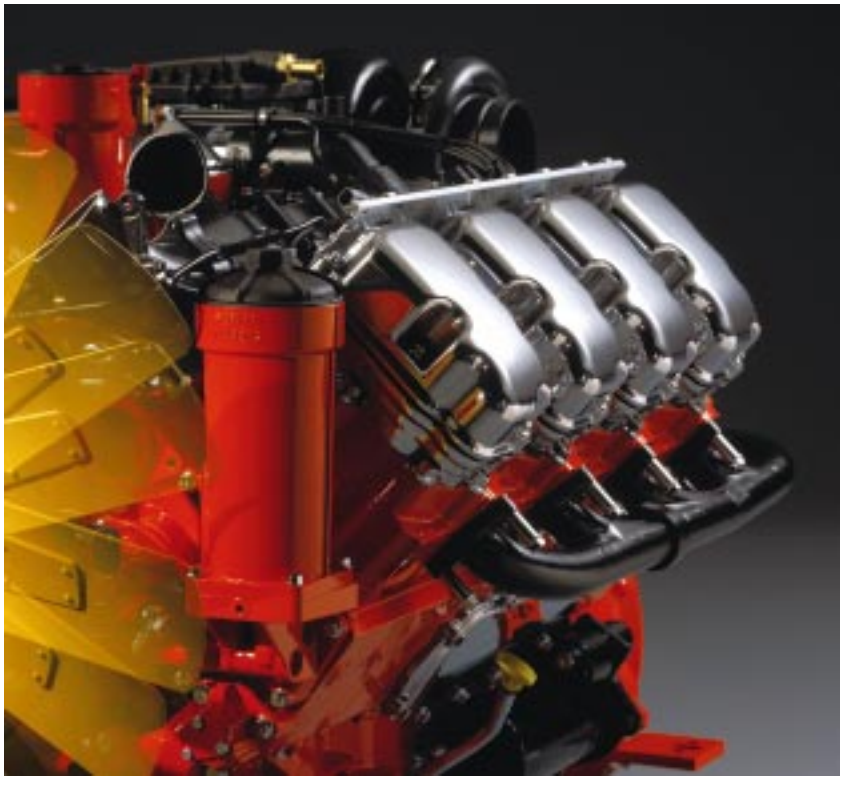
The DC16 is designed to comply with existing environmental regulations, and is well prepared for stricter regulations to come.

ELECTRONIC ENGINE MANAGEMENT

Scania has developed an all-new system for engine management based on CAN or Communicator Area Network technology.

Electronic engine control not only controls the engine's functions during operation, it can also be used for communication with other systems. In order to exchange and collate information from the transmission and power take-off, for example. And to communicate with the machine's other control and warning systems.

The management system can naturally also be utilised for diagnostic purposes in connection with service operations.



Each cylinder features a separate cylinder head instead of having one single head on each bank of cylinders.

Designed for the future, with the focus on the essential.

FLEXIBILITY FOR INDIVIDUAL REQUIREMENTS

The Scania DC16 was developed with three primary goals in mind. It was to have a basic design with features that would allow it to be customised to suit specific requirements – today and in the future. It would combine low fuel consumption and low emissions with quick response to load changes. And like its predecessor, the 14-litre engine, it would be compact to fit most installations.

HOT AND COLD SIDES

The DC16 has a cold side for fuel supply and a hot side for exhaust extraction. This solution offers a variety of benefits.

One of the foremost of these benefits is that it avoids unnecessary heating of the incoming air, which in turn permits better air expansion.

UI TECHNOLOGY FOR INJECTION

The electronically-controlled and mechanically-actuated unit injectors (UIs) provide improved power control and driveline management.

This promotes exceptional efficiency and precise control of the combustion process.

FOUR VALVES PER CYLINDER AND INDIVIDUAL CYLINDER HEADS

Each cylinder has four valves to permit optimum gas flow. The result is more efficient combustion with lower fuel consumption and lower emissions.

CLEANER OIL, LONGER SERVICE LIFE

The two-stage oil filtration system consists of a centrifugal cleaner and a full-flow paper filter element. The highly effective centrifuge removes the tiny particles that would otherwise accumulate between oil changes. In combination with a multi-plate oil cooler, correct temperature further ensures long engine life.

Unit injection for improved performance, and electronical management for individually integrated communication.

Only one paper cartridge minimises environmental impact.

An obvious feature:
The one-man service concept.

OPTIMISED WORKING HOURS

Like all Scania engines, the DC16 is designed for easy repair without requiring special workshop facilities and it is designed according to our one-man service concept. Our modular approach secures availability of replacement parts. If something unexpected happens, the Scania Diagnos fault-tracing system shows which component is defective.

OUR SERVICE CONCEPT

Scania's maintenance concept is as simple and straightforward as it is obvious and effective: since the engine can rarely be transported to a service workshop for attention, service must come to the engine. And this service must be able to be handled by one single mechanic.

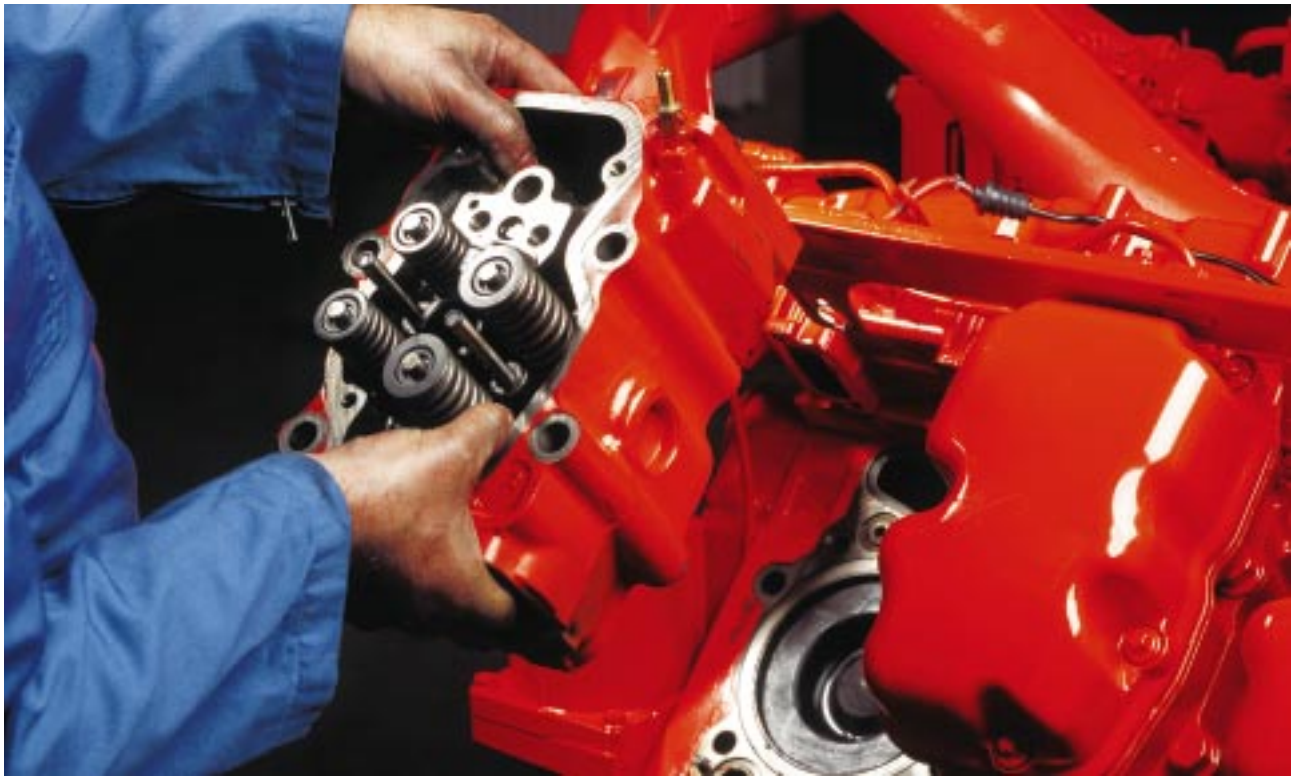
All filters and service points are conveniently accessible. Our concept is most noticeable, however, when it comes to the cylinder heads. Since the DC16 naturally also features one head per cylinder, each cylinder head is light enough to be lifted by one single person.

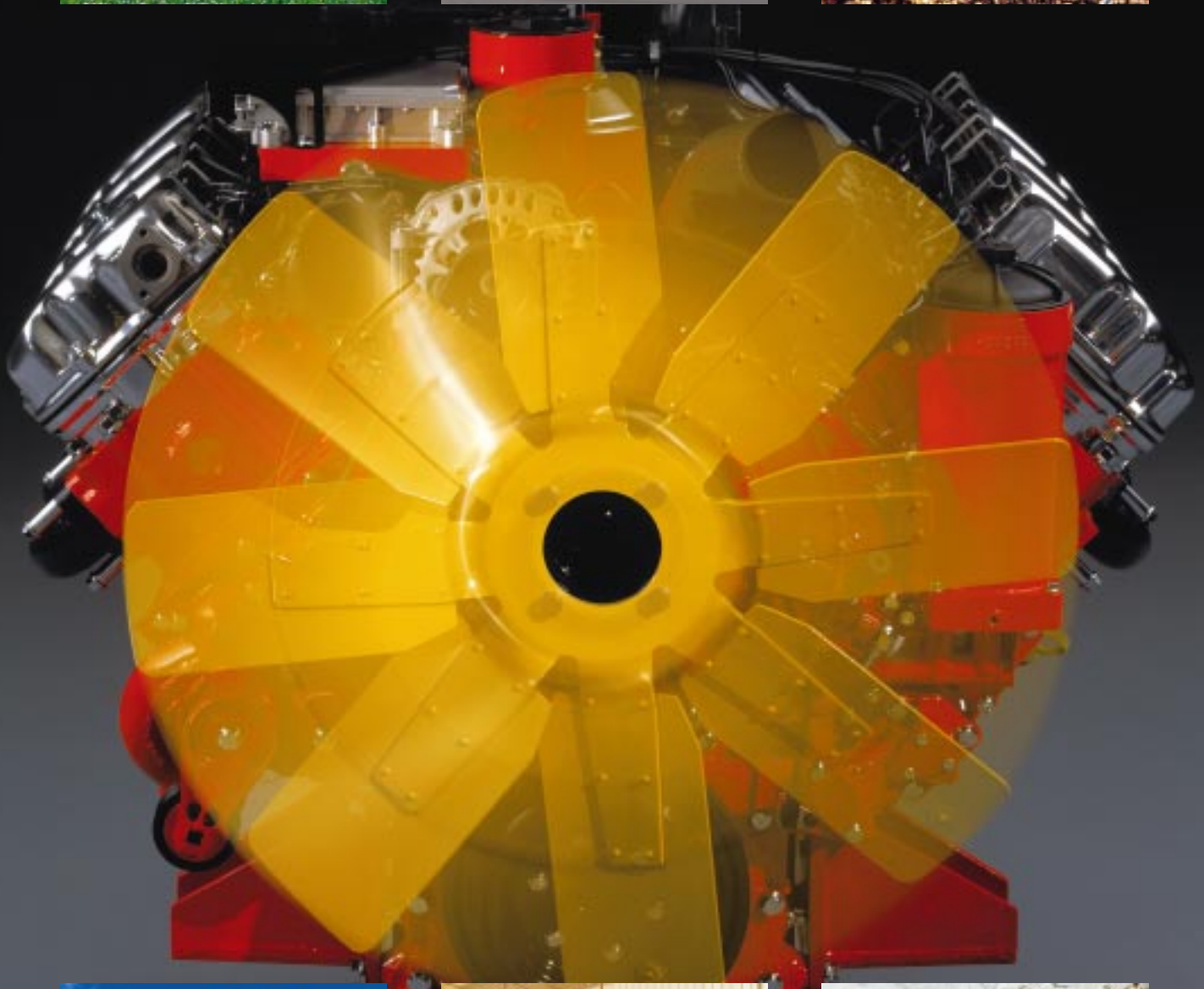
The result is service that is quick, simple – and economical.

OUR PARTS SUPPLY CONCEPT

Scania's engine production is based on a modular approach, where components such as the cylinder heads, cylinders and pistons are found in several engine models. As a result, there is considerable component standardisation.

This concept brings with it many benefits, but from the viewpoint of service, there are two foremost advantages: service staff have fewer methods to learn and remember, and the workshop has fewer replacement parts to keep in stock. The net result is higher quality service and less risk of downtime while waiting for parts to be delivered.





THE DC16 A INDUSTRIAL ENGINE

BASIC DATA

The DC16 A is a water-cooled, 4-stroke diesel engine with unit injection, turbocharged and charge cooled (air-air).

No. of cylinders	8 in 90° V
Displacement	15.6 litre
Bore	127 mm
Stroke	154 mm
Weight, dry	1290 kg*

* excl. radiator and charge-air cooler.

OUTPUT RANGE

Industrial all-speed version Up to 404kW (550hp) at 2100 r/min. (ISO 3046).

Power generation – 50 Hz

Prime Power	Engine gross: 410kW (450kVA)*
Limited Time Power	Engine gross: 455kW (500kVA)*
Emergency Stand-by Power	Engine gross: 499kW (550kVA)*

*kVA values with a generator efficiency common on the market.
(ISO 3046, Prime Power and Limited Time Power also ISO 8528).

Dimensions (mm)

Intended purely as a guide**
H (W) L: 1174 (1060) 1348 to fan interface.

** excl. radiator.

ENGINE DESCRIPTION

Cylinder block Made of cast iron alloy.
Cylinder heads Eight individual cylinder heads.
Injection Unit injection with electronic control unit.
Valves Four valves per cylinder head.
Timing gear train Mounted at the flywheel end of the crankshaft.
Camshaft One camshaft for each cylinder row.
Oil cooler Mounted inside the engine block and of multi-plate type.
Connection rods I-section press-forgings of alloy steel.
Crankshaft Made of steel alloy with hardened and polished bearing surfaces.
Oil sump Made of cast aluminium.
Flywheel Made of cast iron. Direction of rotation seen from flywheel end – counter clockwise.
Electrical system 1-pole 24 V.

ENVIRONMENT

The DC16 complies to 97/68/EC Stage 2, and US EPA Tier 2 regulations.

This specification may be revised without notice.

SCANIA

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