

# 1015M

203–447 kW (272–600 bhp) at 1500–2100 rpm

The engine company.



## Superiority is the sum of all the details.

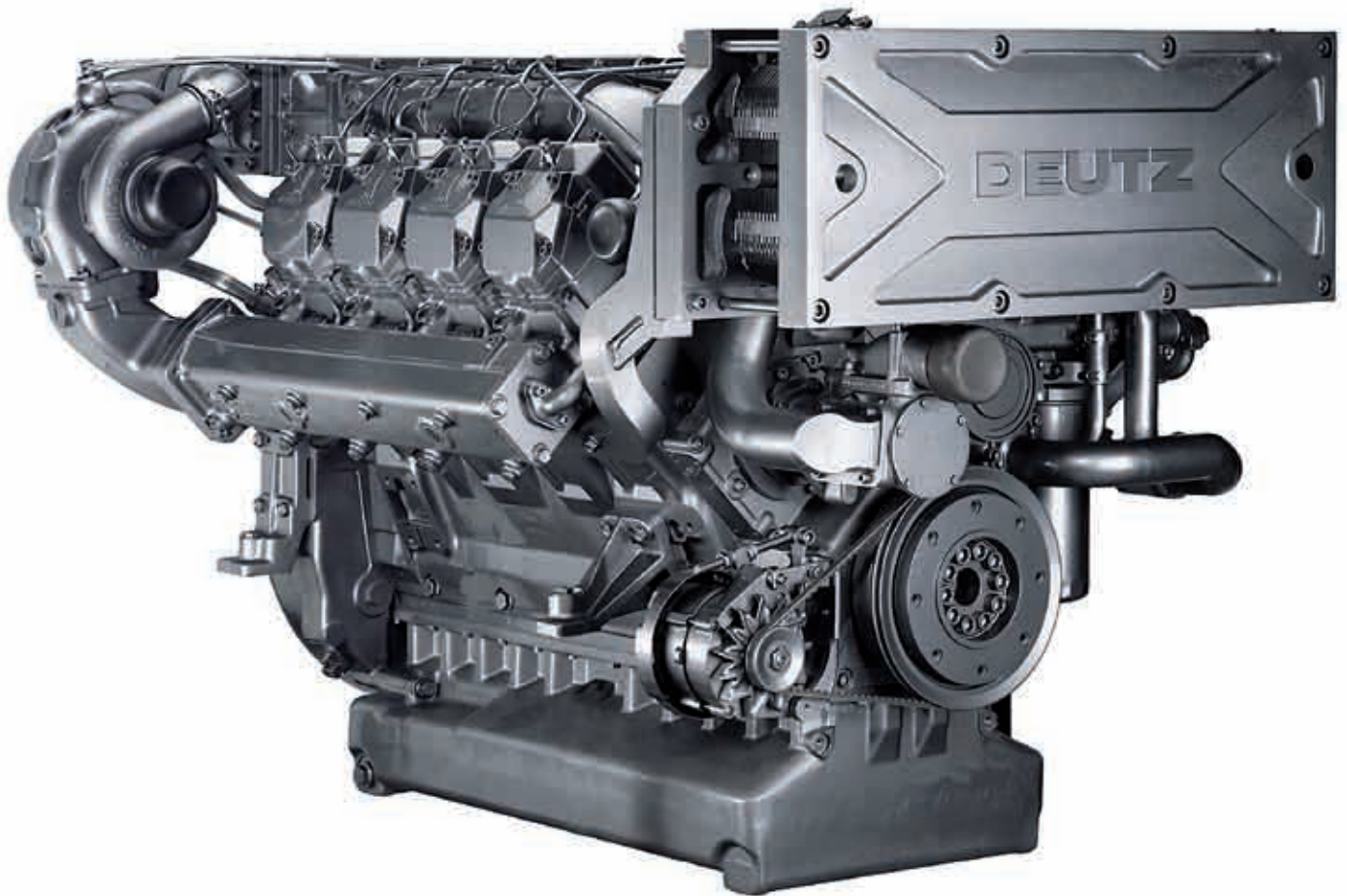
With a long maritime tradition and the sound basis of a leading engine manufacturer DEUTZ engines have an international reputation as reliable, durable and efficient propulsion units for work boats as well as commercial vessels and their auxiliary drives.

The requirements of the engines for the main and auxiliary drives of ships vary. But the key expectations are quite simple: Economy and availability are of the most important for every application.

In order to strengthen our customers' position in the maritime sector we have concentrated on the field of compact engines for marine propulsion and auxiliary drives. The 1015M series reflects the engine manufacturer know-how of DEUTZ in marine applications.

Technically mature and state-of-the-art in engine development, our engines offer the security and reliability in everyday use that our customers demand.

DEUTZ drives also set high standards where economy is concerned. Because in addition to state-of-the-art engine construction criteria and a practical design our drives also feature an exemplary cost/benefit ratio. Great economic values and excellent exhaust gas emissions for the benefit of the environment are all part of the DEUTZ standard.



## Features

Modern water-cooled, four-stroke, 6 and 8-cylinder engines in V configuration | water-cooled turbocharger and exhaust manifold | gear-driven power take-offs | modern injection system with mechanical speed governor | electronic speed governor for genset drives | charge air cooling by engine coolant | innovative multi-parallel cooling system® | compact dimensions

## Your benefits

- Low maintenance costs due to heat exchanger as plate cooler.
- The innovative cooling system reduces the fuel consumption and is a further example of the high reliability.
- Low noise emissions eliminate complex attenuation.
- High reliability and durability due to integrated pipes.
- Classification by all leading classification societies.
- All engines comply with IMO regulations; engines with charge air cooler (MC engine types) comply with ZKR II, EU stage II (2004/26/EG) and US-EPA Marine Tier 2.
- The particle emissions in the MC engine types fall 30 % below the limit value specified in the ZKR II.

## Engine description

<b>Type of cooling:</b>	single-circuit mixture cooling as indirect cooling (DEUTZ Multi-Parallel Cooling system) in raw water cooling with built-on plate heat exchanger, circulation coolant pump, compensation tank, thermostat and raw water pump. In keel cooling with coolant circulation pump and integrated thermostat. Integrated compensation tank as an option
<b>Crankcase:</b>	cast iron crankcase with replacable wet liners
<b>Crankcase breather:</b>	closed version, vacuum-pressure regulator
<b>Cylinder head:</b>	single cylinder heads of cast iron in cross flow version
<b>Valve arrangement/control:</b>	hanging in the cylinder, four valves per cylinder, actuated by tappets, push rods and rocker arms, driven by gears and central camshaft
<b>Piston:</b>	three-ring aluminium piston with cooling channel and ring carrier for the top ring groove
<b>Piston cooling:</b>	by cooling oil by means of spray nozzles
<b>Con rod:</b>	drop-forged steel
<b>Crankshaft:</b>	drop-forged steel, with bolted on counterweights, V6 with split pins offset 30°
<b>Crankshaft and big end bearing:</b>	tri-metal plain bearing
<b>Camshaft:</b>	steel camshaft
<b>Turbocharging:</b>	two water-cooled turbochargers and poss. charge air cooler on the flywheel side
<b>Exhaust manifold:</b>	water-cooled exhaust manifold
<b>Rotary vibration damper:</b>	viscosity vibration damper
<b>Lubricating system:</b>	forced-feed lubrication with gear pumps, lubricating oil cooler integrated in the engine, paper fine filter as exchangeable cartridge in the main lubricating oil stream, duplex change over filter optional
<b>Injection pump/controller:</b>	in-line fuel injector with mechanical (for variable speed) or electronic (for genset) controller
<b>Injection lines:</b>	double walled injection lines for high pressure lines as an option
<b>Fuel system:</b>	mechanical piston pump, exchangeable cartridge for fuel filter, optional duplex change over filter
<b>Generator:</b>	three-phase current generator 28 V / 55 or 80 Ampere
<b>Starter:</b>	24 V/5,4 kW
<b>Heater:</b>	connection possibility for heater or hot water boiler to the engine cooling circuit
<b>Range of variants:</b>	hydraulic pumps, flywheels, connection housing SAE 1 standard, oil pans, air filters, engine feet with elastic mounts, starters, generators, engine control system, ship gear

# Technical data

Engine type		BF6M1015M	BF6M1015MC	BF8M1015MC
Number of cylinders		6	6	8
Bore/stroke	mm   in	132/145   5.19/5.71	132/145   5.19/5.71	132/145   5.19/5.71
Capacity	l   cuin	11.91   727	11.91   727	15.87   968
Compression ratio		17	17	17

Powers for ship engines		BF6M1015M	BF6M1015MC	BF8M1015MC
<b>acc. to power group A</b>				
at 1800 rpm	kW   bhp	203   272	272   365	364   488
at 1900 rpm	kW   bhp	214   287	287   385	383   514
at 2100 rpm	kW   bhp	214   287	287   385	383   514
<b>acc. to power group B</b>				
at 1800 rpm	kW   bhp	207 (228*)   278 (306*)	285 (313*)   380 (417*)	380 (418*)   509 (560*)
at 1900 rpm	kW   bhp	218 (240*)   292 (322*)	300 (330*)   400 (440*)	400 (440*)   536 (590*)
at 2100 rpm	kW   bhp	218 (240*)   292 (322*)	300 (330*)   400 (440*)	400 (447*)   533 (600*)

Powers for on-board units		BF6M1015M	BF6M1015MC	BF8M1015MC
at 1500 rpm – G ("N")	kW   bhp	195 (210)   260 (280)	250 (285)   333 (380)	333 (380)   446 (510)
at 1800 rpm – G ("N")	kW   bhp	211 (228)   281 (304)	271 (310)   361 (413)	362 (413)   483 (551)

\* not classifiable

**Power group A:** Blocked useful power for unlimited continuous operation, SCFN (ICFN\*\*) or MCFN according to ISO 3046-1. Utilisation > 80 %, operating time > 3000 hours.

**Power group B:** Blocked useful power for unlimited continuous operation, SCFN (ICFN\*\*) according to ISO 3046-1. Utilisation < 70 %, operating time < 3000 hours per year.

**Powers for on-board units:** "G" continuous power, SCXN (ICXN\*\*) or MCXN according to ISO 3046-1. Overloadable by 10 % for 1 hour within 12 hour operation.

"N" continuous power, SCXN (ICXN\*\*) according to ISO 3046-1. Overloadable by 10 % for 1 hour within 12 hour operation. Perm. av. utilisation ≤ 80 %.

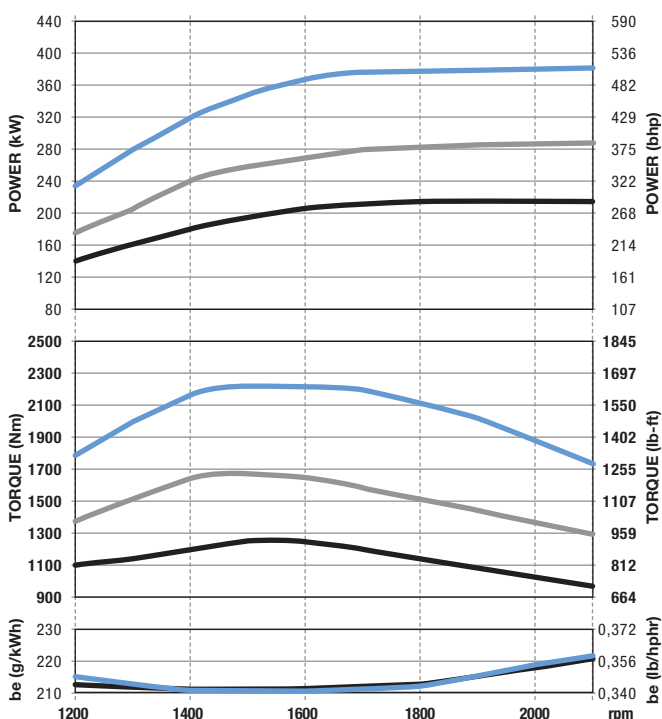
\*\* valid for engines without charge air cooler (standard reference conditions)

The data on this data sheet are for information purpose only and are not binding values. The data in the offer is decisive.

## Standard torque curves

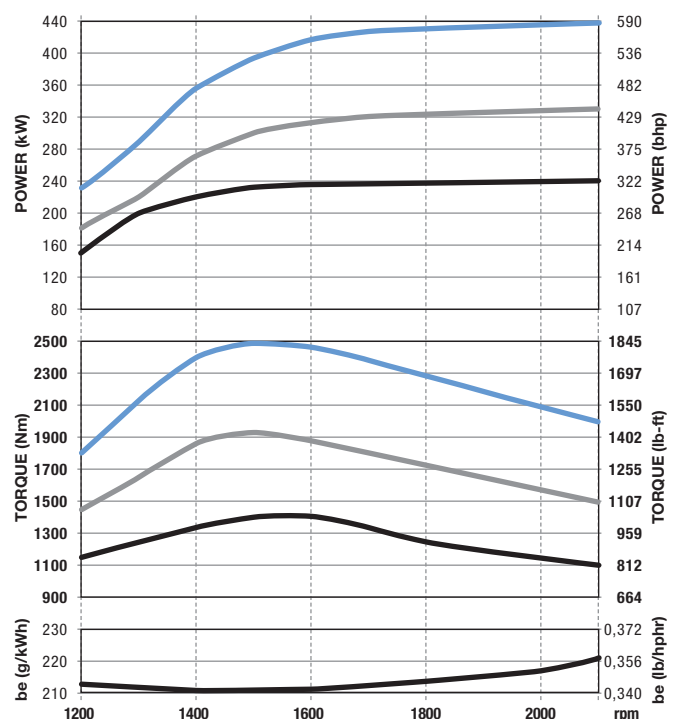
### Power group A 2100 rpm

BF6M1015M | BF6M1015MC | BF8M1015MC



### Power group B 2100 rpm

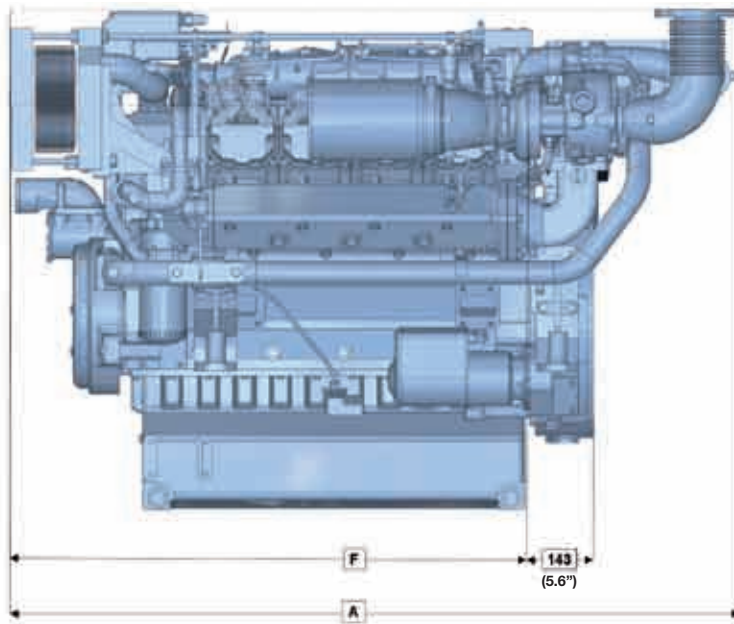
BF6M1015M | BF6M1015MC | BF8M1015MC



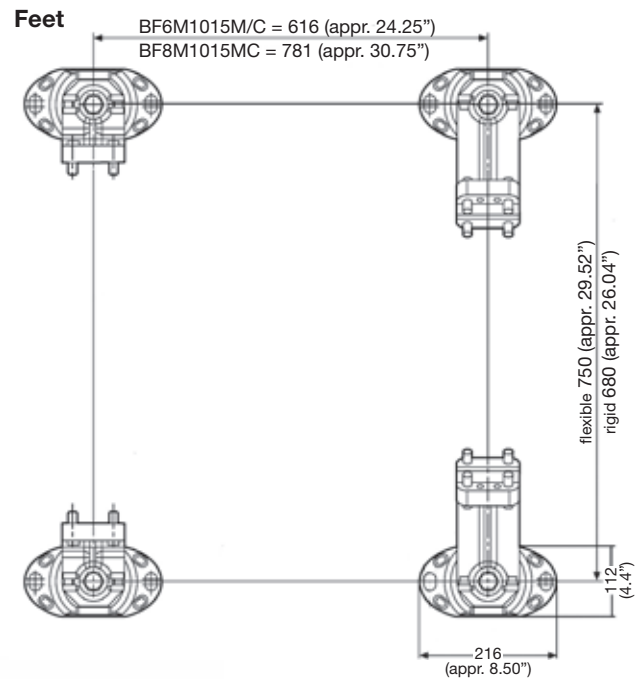
# Raw water cooling

Dimensions		BF6M1015M	BF6M1015MC	BF8M1015MC
A	mm   in	1379   54.27	1482   58.32	1650   64.93
B	mm   in	1316   51.79	1316   51.79	1334   52.50
C	mm   in	1159   45.61	1138   44.78	1057   41.59
D	mm   in	462   18.18	443   17.43	360   14.17
E	mm   in	697   27.43	695   27.35	697   27.43
F	mm   in	1008   39.67	1008   39.67	1187   46.71

Weight		BF6M1015M	BF6M1015MC	BF8M1015MC
Weight dry				
incl. heat exchanger	kg   lbs	1080   2381	1180   2601	1380   3042



Exhaust flange diam.		6-cyl.	8-cyl.
inside	mm   in	68   2.68	105   4.14
outside	mm   in	138   5.43	196   7.72
bolt holes	mm   in	4x ø 14   0.55	8x ø 14   0.55

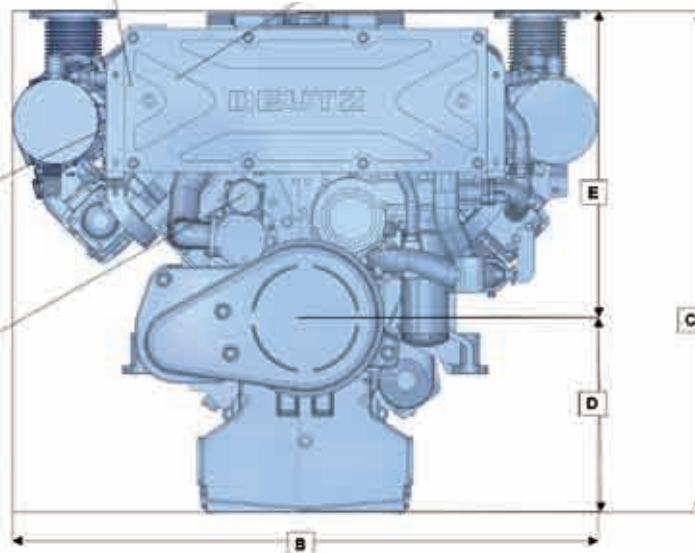


**Fuel return tank**  
internal thread union nut  
**M16 x ø 1.5**

**Fuel inlet**  
internal thread union nut  
**M16 x ø 1.5**

**Raw water outlet**  
ø 70 (appr. 2.76 inches)

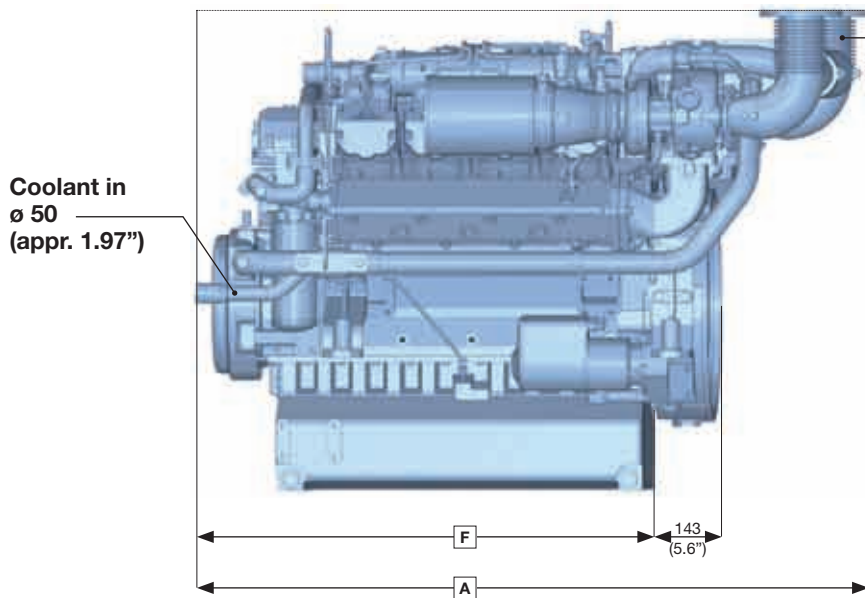
**Raw water inlet**  
ø 80 (appr. 3.16 inches)



# Keel cooling

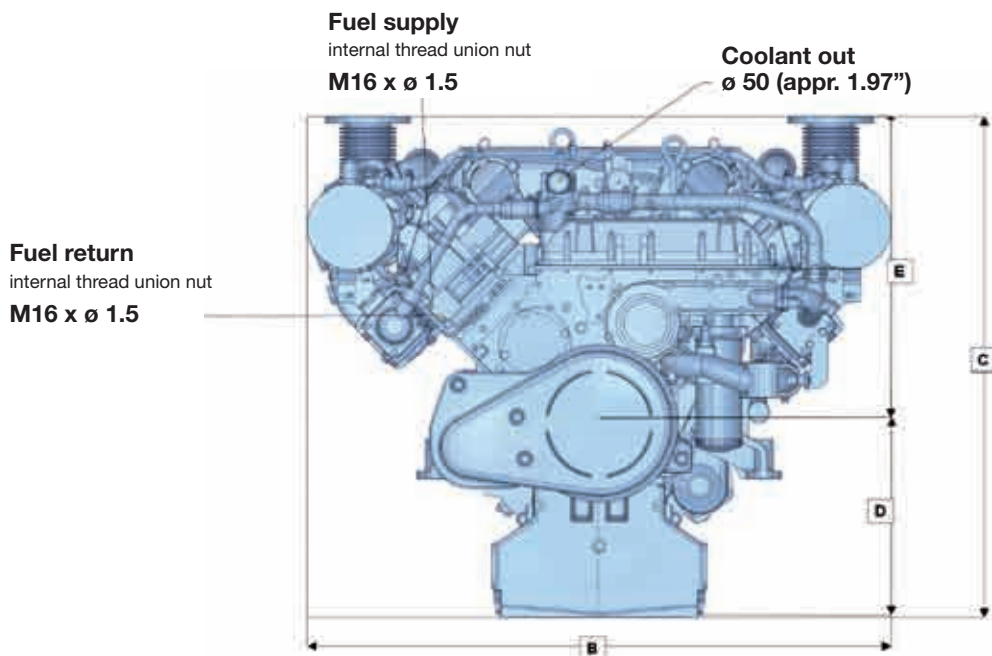
Dimensions		BF6M1015M	BF6M1015MC	BF8M1015MC
A	mm   in	1238   48.74	1375   54.13	1540   60.63
B	mm   in	1316   51.81	1316   51.81	1334   52.52
C	mm   in	1139   44.84	1139   44.84	1061   41.77
D	mm   in	462   18.19	462   18.19	360   14.17
E	mm   in	677   26.65	677   26.65	701   27.60
F	mm   in	867   34.13	901   35.47	1066   41.97

Weight		BF6M1015M	BF6M1015MC	BF8M1015MC
Weight incl. keel cooling	kg   lbs	1020   2250	1110   2448	1310   2888



### Exhaust flange diam.

		6-cyl.	8-cyl.
inside	mm	68	105
	in	2.68	4.14
outside	mm	138	196
	in	5.43	7.72
bolt holes	mm	4x ø 14	8x ø 14
	in	4x ø 0.55	8x ø 0.55



Good service is not a question but the answer.



Our customers demand highest product quality and a clearly predictable performance of our engines economically and ecologically. Everywhere in the world and under all conditions. We are well prepared for this because our service and after-sales departments have a broad, technically sound basis.

680 service partners in 130 countries serve our customers day and night supported by three Logistics Centres in which about 160,000 spare parts items ensure fast repair of the engine in all cases.

This guarantees optimum support of all DEUTZ engines throughout their lifecycle. Our intensively trained and highly motivated service personnel ensures competent consulting and fast assistance for all types of problems.

Individual service and maintenance contracts, quick delivery of spare parts and excellent training offers round off this convincing offer because at DEUTZ you buy more than just the engine.

Rely exclusively on original DEUTZ spare parts because they are specially designed and manufactured for DEUTZ engines as the original components upon delivery.

Our spare parts are tested and optimised continuously and have been designed for your special application in many cases and are not available in this form on the "grey" market by independent third party suppliers. Protect your warranty claims and the performance and life of your DEUTZ engine. Because your DEUTZ only stays a DEUTZ with original spare parts.

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