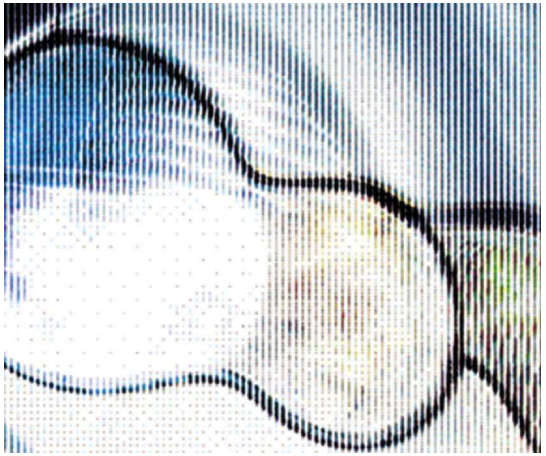
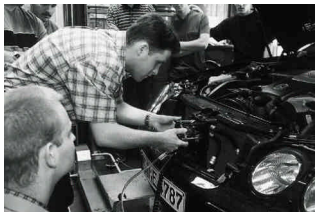
DaimlerChrysler



NM5M • Engine Mechanics Series 500



As at 04/03

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Printed in Germany

Publisher: Global Training

Note:
The term »employees« does not imply any preference of gender and incorporated male and refers to maler and female employees alike.

1510	2995	02	-	1st	edition		09.99	
				2nd	edition	modified	04.03	140

Contents

26.04.2003

	Description of Training Code NM5M - MM 226	26.10.2001

Target group:	Mechanics
Requirements:	The participant has taken part in the Basic Training "Electrical and Electronic Systems - Diagnosis - NEB1". He has worked through the CBT Programs "Pump-line-nozzle (PLD) Part 1+2" or has available equivalent knowledge. He has successfully worked through the preliminary training sent out in advance.
Development stage:	2
Split between practical/theoretical:	70% / 30%
Duration/Location:	2 days, Esslingen-Brühl, mobile
Objectives of course:	The participant is able to: – pinpoint faults of mechanical engine components. – determine condition of engine components and plan and understand the repair procedures required using WIS. – state and describe the extent and contents of the modifications and new features of series 500.
Contents:	– Initial test – Info part in the case of engine series 500 – Training the mechanical design of engine series 500 including practical fault diagnosis and repair work on mechanical engine components as well as on the fuel system (two work stations: "Engine" and "Vehicle")

Concept of EURO 3 of series 500 and series 900

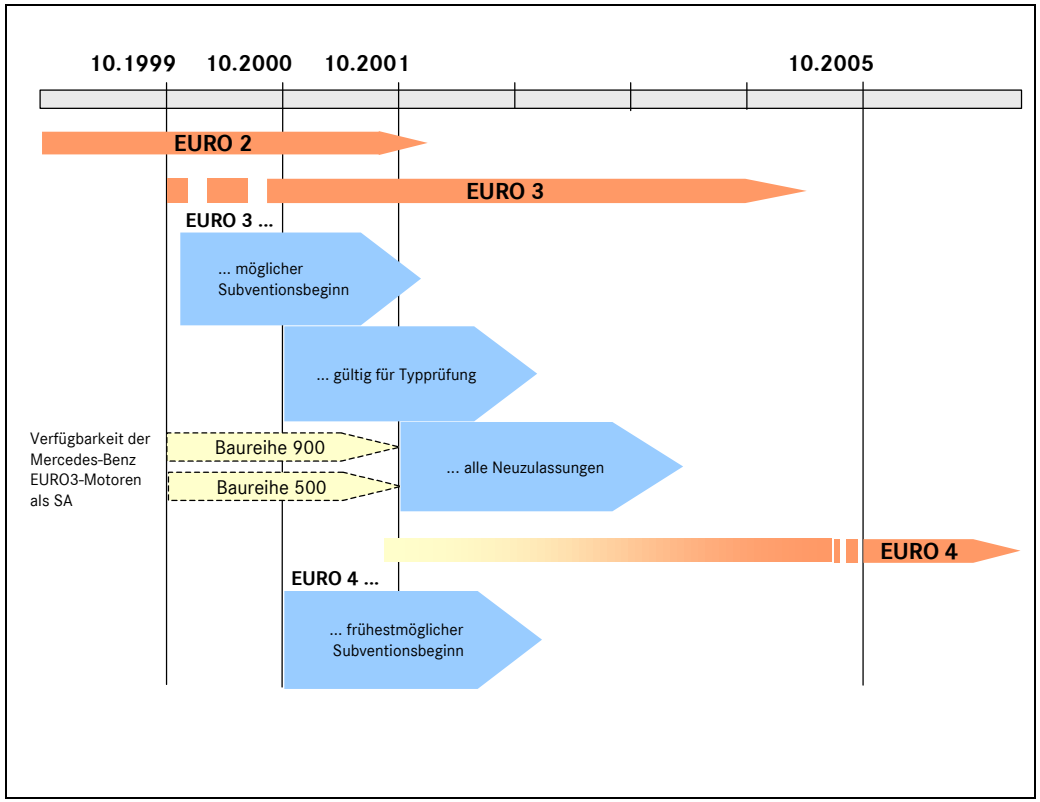
26.10.2001

General

DaimlerChrysler is represented worldwide with a very large range of cars and commercial vehicles, and engines, and has committed itself to environmental protection as a global corporate objective. That is why the aim of the company is always to implement environmentally-relevant legislation and regulations at the earliest possible date in order to be able to offer customers low-emission vehicles and engines in advance of the statutory date of implementation.

In advance of EURO 3 emission regulations vehicles fitted with engine OM 501 LA were offered as optional equipment, initially from 10/99, in the two power stages of 313 hp/394 hp, in a restricted vehicle program, which already comply with the limits which come into effect from 10/2001.

With effect from 01/2000 practically all engines for the ACTROS and ATEGO are available in EURO 3. ECONIC as of approx. 04/2000.



.PPT

Modifications

Engine 541, 542 with essential modifications at the vehicle side:

* Improved cooling module, the system area and block depth are enlarged at the charge air cooler and radiator
* Inlet air flow
* Exhaust system
* Noise encapsulation
* Cab mounting of M, L and LH cab

Code MS3:

* Conversion of nozzle holder combinations from 8- to 6-hole nozzles
* Increase in compression ratio from (ε) 17.25:1 to (ε) 17.5:1
* Telligent engine management with extended functions
* Modified unit pumps
* Camshaft with optimized cam shape for unit pumps
* Optimized inlet valve seat rings and inlet valves

Engine 904, 906 with essential modifications at vehicle side:

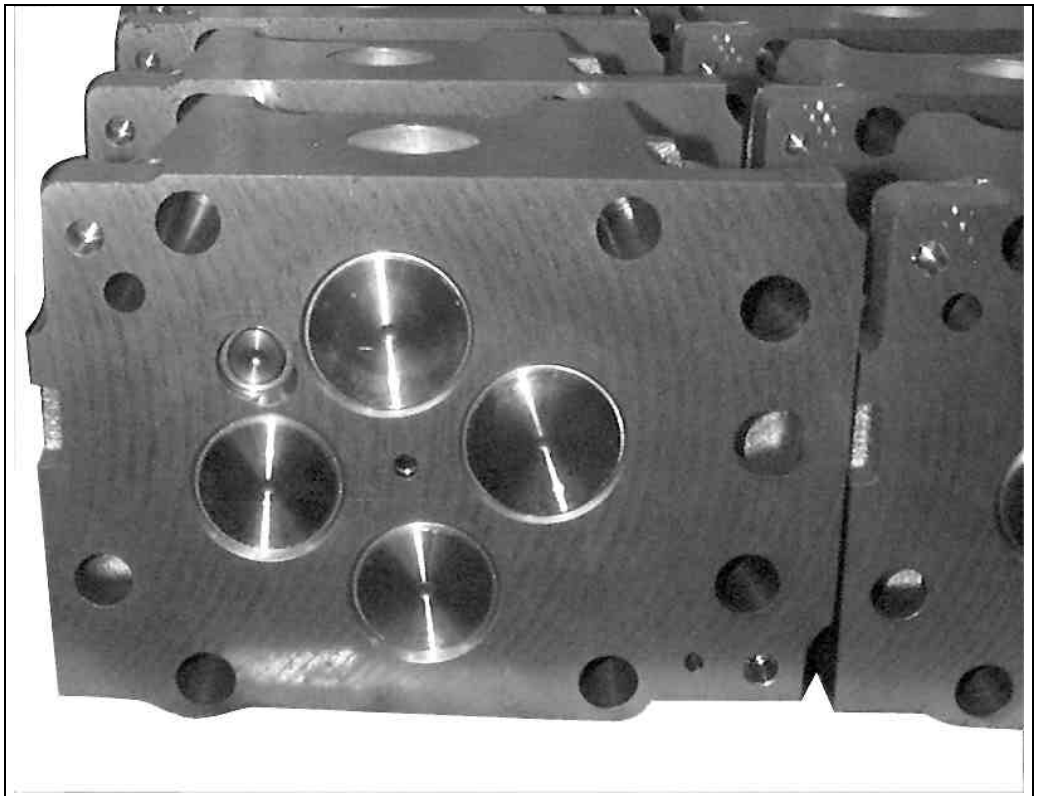
* Improved cooling module, charge air cooler and radiator enlarged

Code MS3:

* Conversion of nozzle holder combinations from 8- to 6-hole nozzles
* Increase in compression ratio from (ε) 17.4:1 to (ε) 18.0:1 as a result of modified piston recess shape
* Telligent engine control with enlarged functions
* Rated engine speed reduced from 2300 rpm to 2200 rpm
* Optimized mechanical oil separator

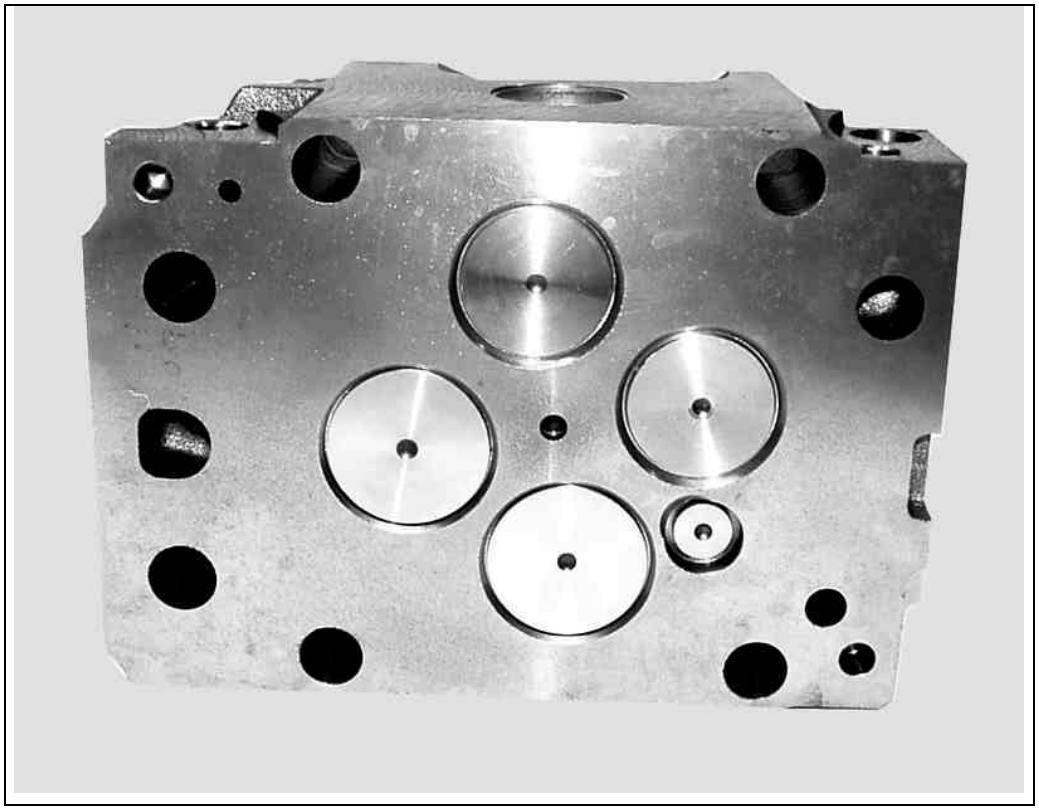
Cylinder heads engine series 500 Euro 2/Euro 3

26.10.2001



Old version of cylinder head, as at 04/99 N01.30-2065-11

The deck surfaces of the previous Euro 2 version were milled.
Since 2000, as part of the "Euro 3" package of measures, the deck surfaces of the cylinder heads are turned to defined surface finish.
This modification has been implemented as of 06/2000 also for all V8 and for the 315 kW V6 engines conforming to Euro 2, as of January 2001 also for all other V6 engines.



Cylinder head in Euro 3 version N01.30-2064-11

The new cylinder heads must be faced only by surface grinding down to a minimum head height of 113.5 mm. The surface finish (peak-to-valley height and waviness) must be maintained in all cases.
Refer also to Work Instruction AR 01.30-W-7162B (06/04/2000).