

State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER A-132-5
Relating to Certification of New Heavy-Duty Motor Vehicle Engines

MAN Nutzfahrzeuge GmbH

Pursuant to the authority vested in the Air Resources Board by Sections 43100, 43102, and 43103 of the Health and Safety Code; and

Pursuant to the authority vested in the undersigned by Sections 39515 and 39516 of the Health and Safety Code and Executive Order G-45-3;

IT IS ORDERED AND RESOLVED: That the following MAN Nutzfahrzeuge GmbH 1987 model-year diesel engines have shown compliance with the transient test procedures and standards and are certified for use in motor vehicles with a manufacturer's gross vehicle weight rating (GVWR) over 8,500 pounds:

<u>Engine Family</u>	<u>Displacement Cubic Inches (Liters)</u>	<u>Exhaust Emission Control Systems (Special Features)</u>
HMA05.7FPA0	347 (5.7)	Smoke Puff Limiter (Diesel Injection - Direct) (Turbocharger) (Air-to-Air Aftercooled)

Engine models and codes are listed on attachments.

The following are the certification emission values for these engine families:

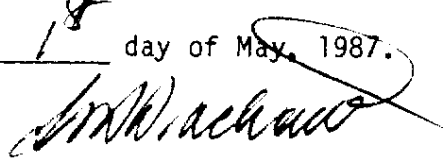
<u>Engine Family</u>	<u>Hydrocarbons gm/bhp-hr</u>	<u>Carbon Monoxide gm/bhp-hr</u>	<u>Hydrocarbons + Nitrogen Oxides gm/bhp-hr</u>	<u>Particulates gm/bhp-hr</u>
HMA05.7FPA0	0.9	3.2	5.6	0.5

BE IT FURTHER RESOLVED: That the Executive Officer has been provided all material required to demonstrate certification compliance with the Board's emission control system warranty regulations (Title 13, California Administrative Code, Section 2036).

Engines certified under this Executive Order must conform to all applicable California emission regulations.

The Bureau of Automotive Repair will be notified by copy of this order.

Executed at El Monte, California this 18 day of May, 1987.


K. D. Drachand, Chief
Mobile Source Division

Manufacturer MAN Nutzfahrzeuge GmbH Engine Family HMA 05.7FPA0
 Evaporative Family Not applicable Engine Type 6 cyl. inline
 Liters (CID) 5.7 (347)

ABBREVIATIONS

Ignition System

- CA-Centrifugal Advance
- ECU-Electronic Control Unit
- EI-Electronic Ignition
- ESAC-Electronic Spark Advance Control
- VA-Vacuum Advance
- VR-Vacuum Retard

Fuel System

- CFI, CL, DID, DIP, EFI, MFI
- nV-nVenturi Carburetor

Exhaust Emissions Control System

- AIP-Air Injection-Pump
- AIV-Air Injection-Valve
- DBC-Dual Bed Catalyst
- EGR-Exhaust Gas Recirculation
- EIC-Electronic Injection Control
- EM-Engine Modification
- OC-Oxidation Catalyst
- OS-Oxygen Sensor
- HOS-Heated Oxygen Sensor
- SPL-Smoke Puff Limiter or Throttle Delay
- TOC-Trap Oxidizer, Continual
- TOP-Trap Oxidizer, Periodical
- TWC-Three-Way Catalyst
- WUOC-Warm-Up Oxidation Catalyst
- WUTWC-Warm-Up Three-Way Catalyst

Special Features

- CCV-Combustion Chamber Valve
- CFI-Central Fuel Injection or Throttle Body Injection
- DID-Diesel Injection-Direct
- DIP-Diesel Injection-Prechamber
- EFI-Electronic Fuel Injection
- IC-Intercooler or Aftercooler
- MFI-Mechanical Fuel Injection
- OBD-On-Board Diagnostics
- TC-Turbocharger
- AC-Aftercooled
- ATAAC-Air-to-Air-Aftercooled

VEHICLE MODELS:

- Engine Family: HMA 05.7 FPA0
- Engine Models: D 0226 MKF/CA
- D 0226 MKFO/CA
- D 0226 MKF/170/CA
- D 0226 MKFO/170/CA
- D 0226 MKF/171/CA
- D 0226 MKFO/171/CA

ISSUED: 050187

Engine: Front Mid Rear
 Drive: FWD RWD 4WD Full Time 4WD Part Time

1987 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET
HEAVY-DUTY DIESEL ENGINES

Manufacturer MAN Nutzfahrzeuge GmbH Engine Family HMA 05.7 FPA0
 Liter (CID) 5.7 (347) Eng. Type 6 cyl. inline
 Emission Control Sys. and (Special Features) SPL (DID, TC, ATAAC)

Engine Model	Fuel Injection Pump Mfr. Part Number	Injector Mfr. Part Number	Maximum Rated HP at RPM	Fuel Rate mm ³ /stroke (lbs/Hr)	Maximum Rated Torque at RPM	Fuel Rate mm ³ /stroke (lbs/Hr)
D 0226 MKF/CA D 0226 MKFO/CA	51.11102-7769 VE6/12F 1400 RV 10520	DLA 31 S 1079	185 ξ 2800	77.4 (73)	457 ξ 1600	96 (51,7)
D 0226 MKF/170 /CA D 0226 MKFO/170 /CA	51.11102-7770 VE6/12F 1400 RV 10583		175 ξ 2800	70 (66)	425 ξ 1600	84 (45,3)
D 0226 MKF/171 /CA D 0226 MKFO/171 /CA	51.11102-7851 VE6/12F 1400 RV 10582		175 ξ 2800	70 (66)	410 ξ 1600	81 (43,7)

Date of Issue 30.01.1987 050187 Revisions: