

State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER U-R-16-42
Relating to Certification of New Off-Road Compression-Ignition Engines

DAIMLERCHRYSLER AG

Pursuant to the authority vested in the Air Resources Board by Sections 43013, 43018, 43101, 43102, 43104 and 43105 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-45-9;

IT IS ORDERED AND RESOLVED: That the following compression-ignition engine and emission control system produced by the manufacturer are certified as described below for use in off-road equipment:

Model Year: 2001

Typical Equipment Usage: Crane, Compressor and Other Industrial Equipment

Fuel Type: Diesel

<u>Engine Family</u>	<u>Engine Displacement (liters)</u>	<u>Useful Life (hours)</u>	<u>Emission Control Systems and Special Features</u>
1MBXL21.9R6A	22 and 11	8000	Direct Diesel Injection Turbocharger Smoke Puff Limiter

Engine models and codes are listed on attachments. Production engines shall be in all material respects the same as those for which certification is granted.

The exhaust emission certification standards and certification values for hydrocarbons (HC), oxides of nitrogen (NO_x), or non-methane hydrocarbons plus oxides of nitrogen (NMHC+NO_x), carbon monoxide (CO), and particulate matter (PM) (units are expressed in grams per kilowatt-hour (g/kw-hr)), and the opacity-of-smoke certification standards and certification values in percent (%) during acceleration (Accel), lugging (Lug), and the peak value from either mode (Peak) for this engine family are as follows (Title 13, California Code of Regulations, Section 2423):

<u>Engine Power Rating (kw)</u>	<u>Emission Standard Category</u>		<u>Exhaust Emissions (g/kw-hr)</u>					<u>Smoke Opacity (%)</u>		
			<u>HC</u>	<u>NO_x</u>	<u>NMHC+NO_x</u>	<u>CO</u>	<u>PM</u>	<u>Accel</u>	<u>Lug</u>	<u>Peak</u>
130≤KW<225	Tier 1	Standard	1.3	9.2	N/A	11.4	0.54	20	15	50
450≤KW≤560	Tier 1	Standard	1.3	9.2	N/A	11.4	0.54	20	15	50
All Above		Certification	0.3	8.2	--	0.7	0.22	12	5	26

BE IT FURTHER RESOLVED: That the listed engine models also comply with "Emission Control Labels— 1996 and Later Off-Road Compression-Ignition Engines" (Title 13, California Code of Regulations, Section 2424) for the aforementioned model-year.

BE IT FURTHER RESOLVED: That for the listed engine models, the manufacturer has submitted the materials to demonstrate certification compliance with the Board's emission control system warranty provisions (Title 13, California Code of Regulations, Sections 2425 and 2426).

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

Executed at El Monte, California this 1st day of March 2001.



R. B. Summerfield, Chief
Mobile Source Operations Division

Manufacturer: **DaimlerChrysler AG**

Process Code: **New Submission**

u-R-16-42

EPA Engine Family: **1MBXL21.9R6A**

Manufacturer Family Name: **NA**

1.Engine Code	2.Engine Model	3.BHP@RPM (SAE Gross)	4.Fuel Rate: mm/stroke @ peak HP (for diesel only)	5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only)	6.Torque @ RPM (SEA Gross)	7.Fuel Rate: mm/stroke@peak torque	8.Fuel Rate: (lbs/hr)@peak torque	9.Emission Control Device Per SAE J1930
444 LA. E I/1	OM 444 LA	670 @ 2100	175	242.5	2028 @ 1200	202	159.7	DDE EM, SPL, TC ↓ EM, SPL ↓ EM, SPL ↓ EM, SPL ↓ EM, SPL
444 LA. E I/2	OM 444 LA	643 @ 1900	175	223.7	2028 @ 1200	198	159.1	
444 LA. E I/6)	OM 444 LA	610 @ 2100	157	217.7	1806 @ 1200	176	139.1	
441 LA. E I/6)	OM 441 LA	292 @ 1600	190	102.5	1032 @ 1200	208	83.5	
444 LA.E I/4	OM 444LA	643 @ 1900	183	225.6	1990 @ 1200	200	197.8	
444 LA.E I/5	OM 444LA	670 @ 2100	175	241.5	1990 @ 1200	200	197.8	