

State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER U-R-16-27
Relating to Certification of New Heavy-Duty Off-Road Equipment Engines

DAIMLERCHRYSLER AG

Pursuant to the authority vested in the Air Resources Board at Sections 43000.5, 43013, and 43018 of the Health and Safety Code; and

Pursuant to the authority vested in the undersigned at Sections 39515 and 39516 of the Health and Safety Code and Executive Order G-45-9;

IT IS ORDERED AND RESOLVED: That the following diesel engines and exhaust emission control systems produced by the manufacturer are certified as described below for use in heavy-duty off-road equipment:

Model Year: 2000

Typical Equipment Usage: Crane, Compressor

Engine Power Ratings Range: 175 – 750 horsepower, inclusive

Fuel Type: Diesel

<u>Engine Family</u>	<u>Displacement</u>		<u>Exhaust Emission Control Systems and Special Features</u>
	<u>Liters</u>	<u>Cubic Inches</u>	
YMBXL21.9R6A	22.0	1350	Turbocharger Smoke Puff Limiter
	15.0	921	
	11.0	674	

The 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 in grams per brake horsepower-hour (g/bhp-h) for total hydrocarbons (THC), carbon monoxide (CO), nitrogen oxides (NOx), and particulate matter (PM), 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>Exhaust Emissions (g/bhp-h)</u>				<u>Smoke Opacity (%)</u>		
	<u>THC</u>	<u>CO</u>	<u>NOx</u>	<u>PM</u>	<u>Accel</u>	<u>Lug</u>	<u>Peak</u>
Standard	1.0	8.5	6.9	0.4	20	15	50
Certification	0.2	0.5	5.7	0.2	10	5	18

BE IT FURTHER RESOLVED: That the listed engine models comply with "Exhaust Emission Standards and Test Procedures—Heavy-Duty Off-Road Diesel-Cycle Engines" (Title 13, California Code of Regulations, Section 2423) for the aforementioned model-year.

BE IT FURTHER RESOLVED: That the listed engine models also comply with "Emission Control Labels—1996 and Later Heavy-Duty Off-Road Diesel-Cycle 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 *et seq.*).

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

Executed at El Monte, California this 10 day of February 2000.


R. B. Summerfield, Chief *for*
Mobile Source Operations Division

LARGE ENGINE MOD L L SUMMARY

EO:U-R-16-27

Process Code: Running Change

Manufacturer: DaimlerChrysler AG

EPA Engine Family: YMBXL21.9R6A

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	170	239.8	2028 @ 1200	198	159.1	EM, SPL
444 LA. E I/2	OM 444 LA	643 @ 1900	175	223.7	2028 @ 1200	198	159.1	EM, SPL
444 LA. E I/3	OM 444 LA	600 @ 2100	153	217.1	1806 @ 1200	170	136.5	EM, SPL
442 LA. E I/1	OM 442 LA	543 @ 2100	217	204.2	1733 @ 1100	262	128.7	EM, SPL
442 LA. E I/2	OM 442 LA	496 @ 2100	198	186.8	1548 @ *	240	117.8	EM, SPL
442 LA. E I/3	OM 442 LA	496 @ 1900	212	180.6	1548 @ 1100	240	117.8	EM, SPL
442 LA. E I/4	OM 442 LA	441 @ 1700	206	157.2	1475 @ 1100	227	111.6	EM, SPL
442 LA. E I/5	OM 442 LA	429 @ 2100	172	162.0	1401 @ 1200	207	110.8	EM, SPL
442 LA. E I/6	OM 442 LA	429 @ 1900	185	158.3	1401 @ 1200	207	110.8	EM, SPL
442 LA. E I/7	OM 442 LA	398 @ 2100	162	152.9	1290 @ 1200	188	100.9	EM, SPL
442 LA. E I/8	OM 442 LA	383 @ 1700	178	135.6	1312 @ 1200	192	103.0	EM, SPL
441 LA. E I/1	OM 441 LA	402 @ 1900	230	143.6	1305 @ 1200	260	103.1	EM, SPL
441 LA. E I/2	OM 441 LA	335 @ 2100	175	123.6	1069 @ 1200	210	84.4	EM, SPL
441 LA. E I/3	OM 441 LA	335 @ 1900	191	*122.4	1069 @ 1200	210	84.4	EM, SPL
441 LA. E I/4	OM 441 LA	320 @ 2100	168	118.8	1069 @ 1200	210	84.4	EM, SPL
441 LA. E I/5	OM 441 LA	316 @ 1800	187	113.6	1032 @ 1200	208	83.5	EM, SPL
441 LA. E I/6	OM 441 LA	292 @ 1600	190	102.5	1032 @ 1200	208	83.5	EM, SPL
444 LA. E I/4	OM 444 LA	643 @ 1900	183	225.6	1990 @ 1200	200	197.8	EM, SPL
444 LA. E I/5	OM 444 LA	670 @ 2100	175	241.5	1990 @ 1200	200	197.8	EM, SPL



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