State of California AIR RESOURCES BOARD

EXECUTIVE ORDER U-R-16-12

Relating to Certification of New Heavy-Duty Off-Road Equipment Engines

MERCEDES-BENZ AG

Pursuant to the authority vested in the Air Resources Board by Sections 43000.5, 43013 and 43018 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 Mercedes-Benz AG 1998 model-year engine, with rated power between 175 and 750 horsepower, and exhaust emission control systems are certified as described below for use in heavy-duty off-road equipment:

Typical Equipment Usage: Crane, Road Grader, Harvester, Compressor

Fuel Type: Diesel

Engine Family	Liters	Exhaust Emission Control Systems and Special Features			
WMBXL12.9R6A	13.0 and 10.0	Turbocharger Smoke Puff Limiter Charge Air Cooler			

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 total hydrocarbons (THC), carbon monoxide (CO), nitrogen oxides (NOx), and particulate matter (PM) certification exhaust emission standards, in grams per brake horsepower-hour (g/bhp-hr), and the opacity of smoke emission standards, in percent (%), during acceleration (Accel), lugging (Lug), and peak (Peak) modes, for this engine family are (Title 13, California Code of Regulations, Section 2423):

<u>Exhaust Emissions (g/bhp-hr)</u>			Smoke Opacity (%)			
<u>THC</u>	<u>C0</u>	<u>NOx</u>	<u>PM</u>	<u>Accel</u>	Lug	<u>Peak</u>
1.0	8.5	6.9	0.4	20	15	50

The THC, CO, NOx and PM exhaust emission certification values, in g/bhp-hr, and the opacity of smoke emission certification values, in percent (%), for this engine family are:

<u>Exhaust Emissions (g/bhp-hr)</u>			<u> Smok</u>	Smoke Opacity (%)		
<u>THC</u>	<u>C0</u>	<u>NOx</u>	PM	<u>Accel</u>	Luq	<u>Peak</u>
0.3	0.4	5.7	0.1	8	1	13

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BE IT FURTHER RESOLVED: That the listed engine models comply with the "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 the "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, Section 2425 et seq.).

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

Executed at El Monte, California this $-\frac{7+4}{100}$ day of April 1998.

R. B. Summerfield, Chief Mobile Source Operations Division

LARGE ENGINE MODEL SUMMARY

E0: u-R-16-12

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MERCEDES-BEN3 84/ Manufacturer:

Process Code: New Submission

EPA Engine Family: WMBXL12.9R6A

8.Fuel Rate: 9.Emission Control (Ibs/hr)@peak torque Device Per SAE J1930) 7.Fuel Rate: mm/stroke@peak torque NA 6.Torque @ RPM (SEA Gross) Manufacturer Family Name: 5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only) 4.Fuel Rate: mm/stroke @ peak HP (for diesel only) 3.BHP@RPM (SAE Gross) 1.Engine Code 2.Engine Model

	EM, SPL,CAC	EM, SPLCAC	EM, SPL, CAC	EM, SPLCAC	R, EM, SPL,CAK	
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•		79.4		63.8		
	194	191	170	160	160	
	1309 @1200	988@1250	870 @ 1200	804 @ 1200	804 @ 1200	
	136.3	113.3	103.9	95.9	100.2	
	147	163	150	138	146	
	375 @ 2100	308 @ 2100	285 @ 2100	268 @ 2100	268 @ 1900	
	OM 402 LA	OM 401 LA	OM 401 LA	OM 401 LA	OM 401 LA	
	402 LA. E I/1	401 LA. E I/1	401 LA. E 1/2	401 LA. E 1/3	401 LA. E 1/4	

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