## State of California AIR RESOURCES BOARD

## EXECUTIVE ORDER U-R-16-11

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

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>Exhaus</u>	t Emissi	ons (g/l	ohp-hr)	<u>Smoke</u>	<u>Opacity</u>	(%)
THC	<u>co</u>	<u>N0x</u>	<u>PM</u>	<u>Accel</u>	<u>Lug</u>	<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>Exhaus</u>	t Emissi	ons (g/	bhp-hr)	Smoke	<u>Opacity</u>	_(%)
THC	<u>co</u>	<u>NOx</u>	<u>PM</u>	<u>Accel</u>	Lug	<u>Peak</u>
0.4	1.0	5.3	0.3	15	9	25

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.

R. B. Summerfield, Chief

Mobile Source Operations Division

## LARGE ENGINE MOLL SUMMARY

E0:4-16-11

Process Code: New Submission

MERCEDES-BENZ AG Manufacturer:

EPA Engine Family: WMBXL5.96R6A	ily: WMBXL5.	96R6A	4.Fuel Rate:	Manufacturer Family Name: 5.Fuel Rate:	amily Name:	NA 7.Fuel Rate:	9	n c
1.Engine Code 2.Engine Model	2.Engine Model	3.BHP@RPM (SAE Gross)	mm/stroke @ peak HP (for diesel only)	(lbs/hr) @ peak HP (for diesels only)	6.Torque @ RPM (SEA Gross)	mm/stroke@peak torque	(lbs/hr)@peak torque	o.ruer rate. 9.c.linsauli Control Ibs/hr)@peak torque Device Per SAE J1930
366 LA. E 1/1 366 LA. E 1/2 366 LA. E 1/3 366 LA. E 1/3 366 LA. E 1/5 366 LA. E 1/5 366 LA. E 1/5	OM 366 LA OM 366 LA OM 366 LA OM 366 LA OM 366 LA OM 366 LA	248@2500 237@2600 233@2500 229@2400 218@2400 208@2600 205@2500	110 101 103 104 100 <b>87</b>	90.4 86.3 84.7 82.0 74.0 71.5	590@* 553@* 553@* 553@* 476@* 476@*	119 114 114 108 93	58.7 56 56 56 53.3 49	76 EM, SPL, AC 76 EM, SPL, CAC 76 EM, SPL, CAC 77 EM, SPL, CAC 77 EM, SPL, CAC 77 EM, SPL, CAC 77 EM, SPL, CAC