State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER U-R-16-8

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 1997 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 (Cubic Inches)	Exhaust Emission Control Systems and Special Features
VMB13.R6DARA	12.8/9.6 (779/584)	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):

Exhaust Emissions (g/bhp-hp)				Smoke Opacity (%)		
THC	CO	NOx	PM	Accel	Lug	Peak
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:

Exhaust Emissions (g/bhp-hr)				Smoke Opacity (%)		
THC	CO	NOx	PM	Accel	Lug	Peak
0.3	0.4	5.7	0.1	8	1	12

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 24th day of April 1997.

R. B. Summerfield, Chief
Mobile Source Operations Division

E. O. # U-R-16-8

1997 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET
HEAVY-DUTY OFF-ROAD DIESEL ENGINES

Manufacturer: MERCEDES-BENZ Engine Family: VMB13.R6DARA
Displacement: 12.8, 9.6 / 779, 584 Liters/Cubic Inches Engine Config: V-8, V-6;
All Codes in Eng. Fam.: CA__ 49 S__ 50 S x Cert. Test Procedures: ARB__ EPA x
Valves / Ports per Cylinder: 2 Strokes per Combustion Cycle: 4
Maximum Rated Power: 375 HP (280 KW) @ 2100 RPM
Ignition: Compression x Compression with Glow Plug__ Spark__
Fuel Type(s): Dedicated x Flex-Fuel__ Dual-Fuel__ Diesel x M100__ M85__
CNG__ LNG__ LPG__ Other (specify)__
Diesel Cert Fuel: 40 CFR 86.1313-94 x Other (specify)__
Primary Service Equipment: Cranes, Compressors, Harvesters, Road Building Machines;
Exhaust ECS (e.g., OC, TWC, PTOX, IFI, TC, CAC): EM, SPL, TC, CAC;
(Use abbreviations per SAE J1930 Jun93)

Engine Model (Engine Code)	Rated HP @ RPM	Fuel Rate @ Rated HP mm3/stroke (lbs/hr)	Fuel Pump & Injector Part No.	ECM/PCM Part No.	EGR Valve Part No.	PTOX / Catalytic Converter Part No.
OM 402 LA (402 LA.E I/1)	375 @ 2100	143...151 (132.5...140.0)	EP 4319 002 017 8321			
OM 401 LA (401 LA.E I/1)	308 @ 2100	158...168 (109.8...116.7)	EP 4136 002 017 8321			
OM 401 LA (401 LA.E I/2)	285 @ 2100	145...154 (100.7...107.0)	EP 4136 002 017 8321			
OM 401 LA (401 LA.E I/3)	268 @ 2100	134...142 (93.1...98.6)	EP 4137 002 017 8321			
OM 401 LA (401 LA.E I/4)	268 @ 1900	142...150 (97.4...102.9)	EP 4137 002 017 8321			

Date Issued:
Revisions: