California Environmental Protection Agency AIR RESOURCES BOARD	DAIMLER AG	EXECUTIVE ORDER U-R-016-0098 New Off-Road Compression-Ignition Engines

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-02-003;

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. Production engines shall be in all material respects the same as those for which certification is granted.

MODEL YEAR	ENGINE FAMILY	DISPLACEMENT (liters)	FUEL TYPE	USEFUL LIFE (hours)
2012	CMBXL15.9RJB	15.9, 11.9	Diesel	8000

SPECIAL FEATURES & EMISSION CONTROL SYSTEMS	TYPICAL EQUIPMENT APPLICATION
Electronic Direct Injection, Turbocharger, Charge Air Cooler, Engine Control Module, Oxidation Catalyst, Selective Catalytic Reduction-Urea, Ammonia Oxidation Catalyst	Crane, Loader, Tractor, Dozer, Compressor

The engine models and codes are attached.

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

RATED POWER CLASS	EMISSION STANDARD CATEGORY		EXHAUST (g/kw-hr)					OPACITY (%)		
			NMHC	NOx	NMHC+NOx	CO	PM	ACCEL	LUG	PEAK
130≤KW≤560	Interim Tier 4/ ALT NOX	STD	0.19	2.0	N/A	3.5	0.02	N/A	N/A	N/A
		CERT	0.18	1.6	--	0.6	0.02	--	--	--

BE IT FURTHER RESOLVED: That for the listed engine models, the manufacturer has submitted the information and materials to demonstrate certification compliance with 13 CCR Section 2424 (emission control labels), and 13 CCR Sections 2425 and 2426 (emission control system warranty).

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

This Executive Order is only granted to the engine family and model-year listed above. Engines in this family that are produced for any other model-year are not covered by this Executive Order.

Executed at El Monte, California on this 30th day of December 2011.

M. Tuvels FOR AGH

Annette Hebert, Chief
Mobile Source Operations Division

ATTACHMENT 1 OF 1

Engine Model Summary Template

U-R-016-0098
12/22/2011

Engine Family	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
CMBXL15.9RJB	502 LA.E3B/1	OM502LA	644 @ 1800	274.7	214.26	2213 @ 1300	311	175.15	DF, TC, ECM,
CMBXL15.9RJB	502 LA.E3B/2	OM502LA	590 @ 1800	253.5	197.72	2065 @ 1300	285.5	160.81	CAC, SCR, OC, AMOX
CMBXL15.9RJB	502 LA.E3B/3	OM502LA	543 @ 1800	230.5	179.74	1918 @ 1300	262.1	147.62	(all ratings)
CMBXL15.9RJB	502 LA.E3B/4	OM502LA	503 @ 1800	209.6	163.50	1770 @ 1300	241.1	135.80	
CMBXL11.9RJB	501 LA.E3B/1	OM501LA	469 @ 1800	266.3	155.77	1696 @ 1300	316.5	133.69	
CMBXL11.9RJB	501 LA.E3B/2	OM501LA	429 @ 1800	241	140.97	1549 @ 1300	283.2	119.66	
CMBXL11.9RJB	501 LA.E3B/3	OM501LA	402 @ 1800	227.9	133.31	1475 @ 1300	269.7	113.90	
CMBXL11.9RJB	501 LA.E3B/4	OM501LA	355 @ 1800	202.6	118.52	1364 @ 1300	247.5	104.56	