California Environmental Protection Agency **Air Resources Board**	DAIMLER AG	**EXECUTIVE ORDER U-R-016-0119-1** 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-14-012;

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)
2016	GMBXL07.7RJA	7.7	Diesel	8000

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

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
75≤KW≤560	Tier 4 Final	STD	0.19	0.40	N/A	3.5	0.02	N/A	N/A	N/A
		CERT	0.04	0.36	--	0.4	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).

BE IT FURTHER RESOLVED: That for the listed engine models, the manufacturer has complied with the more stringent set of standards from the various power categories in conformance with Section 1039.230 (e) of the "California Exhaust Emission Standards and Test Procedures for 2008 and Later Tier 4 Off-Road Compression-Ignition Engines, Part I-C" adopted October 20, 2005 and last amended October 25, 2012.

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.

This Executive Order hereby supersedes Executive Order U-R-016-0119 dated December 24, 2015.

Executed at El Monte, California on this 29th day of March 2016.

Annette Hebert, Chief
Emissions Compliance, Automotive Regulations and Science Division

ATTACHMENT 1 OF 1

U-R-016-0119-1
Running Change 3/14/2016

Engine Model Summary Template

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 diesel only)	6. Torque@RPM (SAE Gross)	7. Fuel Rate: (lbs/hr)@peak torque	8. Fuel Rate: mm/stroke@peak torque	9. Emission Control Device per SAE J1930
GMBXL07.7RJA	936LA.E4-1	OM936LA	260KW@2200	162,58	53,85 Kg/h	1400Nm@1200-1600	187,23	39,46 Kg/h	DDI,TC, ECM, CAC, SCR, OC, EGR, AMOX
GMBXL07.7RJA	936LA.E4-2	OM936LA	230KW@2200	144,23	47,77 Kg/h	1250Nm@1200-1600	165,07	34,79 Kg/h	DDI,TC, ECM, CAC, SCR, OC, EGR, AMOX
GMBXL07.7RJA	936LA.E4-3	OM936LA	210KW@2200	131,22	43,46 Kg/h	1150Nm@1200-1600	151,22	31,87 Kg/h	DDI,TC, ECM, CAC, SCR, OC, EGR, AMOX
GMBXL07.7RJA	936LA.E4-4	OM936LA	180KW@2200	114,06	37,78 Kg/h	1000Nm@1200-1600	132,18	27,86 Kg/h	DDI,TC, ECM, CAC, SCR, OC, EGR, AMOX
GMBXL07.7RJA	934LA.E4-1	OM934LA	170KW@2200	152,12	33,59 Kg/h	900Nm@1200-1600	177,89	25,00 Kg/h	DDI,TC, ECM, CAC, SCR, OC, EGR, AMOX
GMBXL07.7RJA	934LA.E4-2	OM934LA	150KW@2200	135,67	29,96 Kg/h	800Nm@1200-1600	155,87	21,90 Kg/h	DDI,TC, ECM, CAC, SCR, OC, EGR, AMOX
GMBXL07.7RJA	934LA.E4-3	OM934LA	129KW@2200	121,70	26,90 Kg/h	750Nm@1200-1600	149,29	21,00 Kg/h	DDI,TC, ECM, CAC, SCR, OC, EGR, AMOX
GMBXL07.7RJA	934LA.E4-4	OM934LA	100KW@2200	96,22	21,25 Kg/h	600Nm@1200-1600	121,38	17,06 Kg/h	DDI,TC, ECM, CAC, SCR, OC, EGR, AMOX