KOMATSU LIMITED

EXECUTIVE ORDER U-R-005-0391 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	CKLXL03.3JDA	3.26	Diesel	8000			
	FEATURES & EMISSION		TYPICAL EQUIPMENT APPLICATION				
Electronic Direct Injection, Turbocharger, Charge Air Cooler, Exhaust Gas Recirculation, Diesel Oxidation Catalyst, and Engine Control Module			Loader, Generator Set, and Other Industrial Equipment				

The engine models and codes are attached.

The following are the exhaust certification standards (STD) and certification levels (CERT) for non-methane hydrocarbon (NMHC), 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	EMISSION STANDARD CATEGORY		EXHAUST (g/kw-hr)					OPACITY (%)		
POWER			NMHC	NOx	NMHC+NOx	СО	PM	ACCEL	LUG	PEAK
56 ≤ kW ≤ 130	Interim Tier 4 / ALT NOx	OPTIONAL STD	0.19	3.4	N/A	5.0	0.02	N/A	N/A	N/A
		CERT	0.06	2.9		0.4	0.02			

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.

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

day of December 2011.

Annette Hebert, Chief

Mobile Source Operations Division

Attachment 1 of 1

Engine Model Summary Template

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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		9.Emission Control PDevice Per SAE J1930
CKLXL03.3JDA	4C01	SAA4D95LE-6	120@2400	86	45	306@1600	98	34	EM,TC,CAC,EGR,ECM,OC
CKLXL03.3JDA	4C02	SAA4D95LE-6	100@2600	71	40	306@1600	98	34	EM,TC,CAC,EGR,ECM,OC
CKLXL03.3JDA	4C03	SAA4D95LE-6	85@2600	60	34	277@1600	87	30	EM,TC,CAC,EGR,ECM,OC
CKLXL03.3JDA	4C04	SAA4D95LE-6	110@2400	80	42	306@1600	98	34	EM,TC,CAC,EGR,ECM,OC
CKLXL03.3JDA	4C05	SAA4D95LE-6	107@2200	82	40	306@1600	98	35	EM,TC,CAC,EGR,ECM,OC
CKLXL03.3JDA	4C06	SAA4D95LE-6	91@2200	69	34	306@1600	98	35	EM,TC,CAC,EGR,ECM,OC
CKLXL03.3JDA	4C07	SAA4D95LE-6	97@2050	78	36	283@1500	90	30	EM,TC,CAC,EGR,ECM,OC