California Environmental Protection Agency Air Resources Board

KUBOTA Corporation

EXECUTIVE ORDER U-R-025-0616 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 engines and emission control systems 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)							
2014	EKBXL03.8AMD	Diesel	8000								
SPECIAL	FEATURES & EMISSION (CONTROL SYSTEMS	TYPICAL EQUIPMENT APPLICATION								
Coole	ic Direct Injection, Turboo r, Electronic Control Modu ecirculation, Diesel Oxida and Periodic Trap Ox	ule, Exhaust Ğas tion Catalyst,	Agricultural Tractor and Skid Steer Loader								

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			E	EXHAUST (g/kw	OPACITY (%)				
POWER CLASS	STANDARD CATEGORY		НС	NOx	NMHC+NOx	со	PM	ACCEL	LUG	PEAK
56 <u><</u> kW < 130	Interim Tier 4 / ALT NOx	STD	0.19	3.4	N/A	5.0	0.02	N/A	N/A	N/A
		CERT	0.002	2.6		0.03	0.003			

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 2013.

Erik White, Chief

Mobile Source Operations Division

Engine Model Summary Form

KUBOTA Corporation Manufacturer:

Nonroad Cl Engine category:

EKBXL03.8AMD EPA Engine Family:

Mfr Family Name:

New Submission Process Code:

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9.Emission Control Device Per SAE J1930	EM, DFI, TC, EGR, CAC, ECM, PTOX, DO	EM, DFI, TC, EGR, CAC, ECM, PTOX,	meet the Injection														
8,Fuel Rate: (lbs/hr)@peak torque	28.3	27.4	27.4	27.4	27.5	25.2	25.6	25.6	27.3	27.4	27.4	27.3	0=110				
7.Fuel Rate: mm/stroke@peak torque	84.5	81.6	81.6	81.6	81.9	75.3	76.4	76.4	81.4	81.6	81.6	81.4					
6.Torque @ RPM (SEA Gross)	276.9@1500	272.6@1500	272.6@1500	272.6@1500	272.6@1500	251.5@1500	255.3@1500	255.3@1500	272.6@1500	272.6@1500	272.6@1500	272.6@1500					
5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only)	43.6	41.3	39.3	37.3	42.3	38.1	38.9	37.6	33.5	39.3	37.3	33.5					
4.Fuel Rate: mm/stroke @ peak HP (for diesel only)	75.0	71.1	73.3	75.9	72.8	65.5	6.99	70.0	68.1	73.3	75.9	68.1					
3.BHP@RPM (SAE Gross)	116.3@2600	112.0@2600	108.4@2400	103.8@2200	114.0@2600	102.2@2600	104.5@2600	102.9@2400	92.8@2200	108.4@2400	103.8@2200	92.8@2200					
2.Engine Model	V3800-CR-TI-EF	V3800-CR-TI-EF	V3800-CR-TI-EF	V3800-CR-TI-EF	V3800-CR-TI-EF	V3800-CR-TI-EF	V3800-CR-TI-EF	V3800-CR-TI-EF	V3800-CR-TI-EF	C3.8-CR-TI-EF	D3.8H-CR-TI-EF	D3.8H-CR-TI-EF					
1.Engine Code	V3800-CR-TI-EF01	V3800-CR-TI-EF02	V3800-CR-TI-EF03	V3800-CR-TI-EF04	V3800-CR-TI-EF05	V3800-CR-TI-EF06	V3800-CR-TI-EF07	V3800-CR-TI-EF08	V3800-CR-TI-EF09	C3.8-CR-TI-EF03	D3.8H-CR-TI-EF04	D3.8H-CR-TI-EF09					