## California Environmental Protection Agency Air Resources Board

## **KUBOTA Corporation**

EXECUTIVE ORDER U-R-025-0602 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	EKBXL01.0BCB	1.002	Diesel	3000						
SPECIAL	FEATURES & EMISSION C	CONTROL SYSTEMS	TYPICAL EQUIPMENT APPLICATION							
	Indirect Diesel Injec	ction	Tractor, Compressor, Genera and Other Industrial Equipr	tor Set, ment						

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-l	OPACITY (%)				
POWER CLASS	STANDARD CATEGORY		NMHC	NOx	NMHC+NOx	co	PM	ACCEL	LUG	PEAK
8 <u>&lt;</u> kW < 19	Tier 4 Final	STD	N/A	N/A	7.5	6.6	0.40	20	15	50
		CERT			6.6	1.7	0.25	3	3	5

**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**

Manufacturer: KUBOTA Corporation

Engine category: Nonroad CI

EPA Engine Family: **EKBXL01.0BCB**Mfr Family Name: **N/A** 

Process Code: New Submission

Attachment page 1 of

EO# U-R-025-0602

Date: 11/21/2013

								 		20		 				 		
9.Emission Control Device Per SAE J1930	EM, IFI		7 1 6 1 1	irect the Inject														
8.Fuel Rate: (lbs/hr)@peak torque	9.2	9.0	8.3	7.4	6.9	6.4	9.9		+	THI = 140								
7.Fuel Rate: mm/stroke@peak torque	22.9	22.4	22.6	22.2	21.7	22.3	19.8											
6.Torque @ RPM (SEA Gross)	47.4@2400	45.9@2400	46.3@2200	45.6@2000	44.5@1900	45.6@1700	40.8@2000											i.u.
5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only)	11.2	11.2	10.4	9.2	8.7	8.4	8.3											
4.Fuel Rate: mm/stroke @ peak HP (for diesel only)	20.9	20.8	20.7	19.7	19.3	19.3	19.8											
3.BHP@RPM (SAE Gross)	24.8@3200	24.8@3200	23.5@3000	20.9@2800	19.8@2700	19.4@2600	19.0@2500											
2.Engine Model	D1005-EF								×									
1.Engine Code 2.Engine Model	D1005-EF01	D1005-EF02	D1005-EF03	D1005-EF04	D1005-EF05	D1005-EF06	D1005-EF07										8	