California Environmental Protection Agency AIR RESOURCES BOARD	KUBOTA Corporation	EXECUTIVE ORDER U-R-025-0486 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)
2011	BKBXL02.0FCD	1.499, 1.999	Diesel	5000

SPECIAL FEATURES & EMISSION CONTROL SYSTEMS	TYPICAL EQUIPMENT APPLICATION
Indirect Diesel Injection	Tractor, Compressor, Generator Set, Other Industrial Equipment

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 (%)		
			HC	NOx	NMHC+NOx	CO	PM	ACCEL	LUG	PEAK
8 ≤ kW < 37	Tier 4 Interim	OPTIONAL STD	N/A	N/A	7.5	5.5	0.30	20	15	50
		CERT	--	--	5.8	0.9	0.12	2	2	3

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 2 day of December 2010.

Annette Hebert, Chief
Mobile Source Operations Division

Engine Model Summary Form

EO# U-R-025-0486

Date: 12/2/2010

Complete: 11/29/2010

Attachment

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Manufacturer: **KUBOTA Corporation**

Engine category: **Nonroad CI**

EPA Engine Family: **BKBXL02.0FCD**

Mfr Family Name: **N/A**

Process Code: **New Submission**

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
D1503-M-ET01	D1503-M-ET	31.9@2800	29.4	13.8	70.0@1600	32.4	8.7	EM IDI
D1503-M-ET02	D1503-M-ET	25.1@2200	27.5	10.1	68.8@1600	31.8	8.5	EM
D1503-M-ET03	D1503-M-ET	30.7@2700	29.2	13.2	70.0@1600	32.4	8.7	EM
D1503-M-ET04	D1503-M-ET	29.6@2600	29.0	12.6	70.0@1600	32.4	8.7	EM
D1503-M-ET05	D1503-M-ET	28.4@2500	28.8	12.1	70.0@1600	32.4	8.7	EM
D1503-M-ET06	D1503-M-ET	27.4@2400	28.0	11.3	68.8@1600	31.8	8.5	EM
D1503-M-ET07	D1503-M-ET	26.1@2300	27.7	10.7	68.8@1600	31.8	8.5	EM
D1503-M-ET08	D1503-M-ET	30.0@2800	27.7	13.0	70.0@1500	32.4	8.1	EM
V2003-M-ET01	V2003-M-ET	43.7@2800	29.6	18.5	97.3@1600	33.3	11.9	EM
V2003-M-ET02	V2003-M-ET	43.7@2800	29.6	18.5	96.1@1600	32.9	11.8	EM
V2003-M-ET03	V2003-M-ET	34.5@2200	27.8	13.7	94.5@1600	32.7	11.7	EM
V2003-M-ET04	V2003-M-ET	42.2@2700	29.2	17.6	96.1@1600	32.9	11.8	EM
V2003-M-ET05	V2003-M-ET	40.6@2600	28.7	16.7	96.1@1600	32.9	11.8	EM
V2003-M-ET06	V2003-M-ET	39.2@2500	28.5	15.9	96.1@1600	32.9	11.8	EM
V2003-M-ET07	V2003-M-ET	37.5@2400	28.3	15.2	94.5@1600	32.7	11.7	EM
V2003-M-ET08	V2003-M-ET	35.9@2300	28.1	14.4	94.5@1600	32.7	11.7	EM
V2003-M-ET09	V2003-M-ET	40.2@2700	27.8	16.8	93.7@1500	32.1	10.8	EM