California Environmental Protection Agency AIR RESOURCES BOARD	KUBOTA Corporation	EXECUTIVE ORDER U-R-025-0481 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	BKBXL01.5BCD	1.123, 1.498	Diesel	5000

SPECIAL FEATURES & EMISSION CONTROL SYSTEMS	TYPICAL EQUIPMENT APPLICATION
Indirect Diesel Injection, Electronic Control Module (Some Models)	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
19 ≤ kW < 37	Tier 4 Interim	STD	N/A	N/A	7.5	5.5	0.30	20	15	50
		CERT	--	--	5.1	1.1	0.17	6	8	12

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-025-0481

Date: 12/2/2010

Complete: 11/29/2010

Attachment

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Manufacturer: **KUBOTA Corporation**

Engine category: **Nonroad CI**

EPA Engine Family: **BKBXL01.5BCD**

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
D1105-ET01	D1105-ET	29.1@3600	22.5	13.6	48.1@2600	23.5	10.2	EM
D1105-ET01e	D1105-ET	29.1@3600	22.5	13.6	48.1@2600	23.5	10.2	EM,Electronic
D1105-ET02	D1105-ET	27.4@3600	21.2	12.8	44.7@2600	21.8	9.5	EM
V1505-ET01	V1505-ET	37.3@3000	24.6	16.5	71.3@2200	24.8	12.2	EM
V1505-ET02	V1505-ET	38.9@3600	22.2	17.9	64.2@2600	23.0	13.4	EM
V1505-ET03	V1505-ET	36.5@3600	20.8	16.7	60.0@2600	21.5	12.5	EM
V1505-ET04	V1505-ET	35.5@3000	23.4	15.7	69.3@2200	24.1	11.9	EM
V1505-ET05	V1505-ET	33.5@3000	22.1	14.8	69.3@2200	24.1	11.9	EM
V1505-ET06	V1505-ET	33.5@2850	22.9	14.6	69.3@2100	24.1	11.3	EM
V1505-ET07	V1505-ET	32.9@2800	22.7	14.2	69.3@1700	24.4	9.3	EM
V1505-ET08	V1505-ET	29.6@2700	21.1	12.7	67.9@1900	23.9	10.2	EM
V1505-ET09	V1505-ET	30.4@2600	22.4	13.0	69.3@1700	24.4	9.3	EM
V1505-ET10	V1505-ET	30.4@2600	22.4	13.0	68.9@1700	24.3	9.2	EM
V1505-ET11	V1505-ET	28.2@2600	20.7	12.0	68.2@1600	24.1	8.6	EM
V1505-ET12	V1505-ET	28.2@2600	20.7	12.0	66.5@1600	23.5	8.4	EM
V1505-ET13	V1505-ET	29.2@2500	22.3	12.5	66.4@1900	23.4	9.9	EM
V1505-ET14	V1505-ET	28.4@2400	22.4	12.0	64.0@1900	22.6	9.6	EM
V1505-ET15	V1505-ET	28.4@2400	22.4	12.0	69.3@1600	24.4	8.7	EM
V1505-ET16	V1505-ET	28.2@2400	22.4	12.0	68.2@1600	24.1	8.6	EM
V1505-ET17	V1505-ET	27.0@2300	22.1	11.4	69.3@1600	24.4	8.7	EM
V1505-ET18	V1505-ET	26.0@2200	22.2	10.9	65.3@1600	23.1	8.3	EM
V1505-ET19	V1505-ET	30.3@2700	21.7	13.1	68.2@1900	24.1	10.2	EM
V1505-ET20	V1505-ET	30.8@2700	22.1	13.3	69.3@1900	24.4	10.4	EM

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