**California Environmental Protection Agency** AIR RESOURCES BOARD

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	BKBXL02.2RCD	2.216	Diesel	5000
	FEATURES & EMISSION		TYPICAL EQUIPMENT A	
Ele	Mechanical Direct Inj ctronic Control Module (S	ection, Some Models)	Refrigeration L	Inits

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	EMISSION			E	XHAUST (g/kW-l	hr)		OF	PACITY (%	b)
POWER CLASS	STANDARD CATEGORY		НС	NOx	NMHC+NOx	со	PM	ACCEL	LUG	PEAK
19 <u>&lt;</u> kW < 37	Tier 4 Interim	STD	N/A	N/A	7.5	5.5	0.30	20	15	50
		CERT			6.1	1.0	0.21	1	1	1

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 January 2010.

to the

Annette Hebert, Chief Mobile Source Operations Division

**Engine Model Summary Form** 

KUBOTA Corporation BKBXL02.2RCD Nonroad CI Mfr Family Name: N/A EPA Engine Famly. Engine category: Manufacturer:

Attochment

E0# U-R-025-0464

0/22/ 21/1

Old   3HP@Frail   4.Feel Fate: (True Fate: 2.E.A Gross)   7.Feel Fate: (True Fate: 2.E.A Gross)   7.Feel Fate: (True Fate: 2.E.A Gross)   7.Feel Fate: 2.E.A Gross)   6.Feel Fate: 2.E.A Gross)   7.Feel Fate: 2.E.A Gross)   6.Feel Fate: 2.E.A Gross)   7.Feel Fate: 2.E.A Gross)   6.Feel Fate: 2.E.A Gross)   7.Feel Fate: 2.Feel Fatel Fate: 2.Feel Fate: 2.Feel Fat:	Mir Family Name: NA Process Code: Nev	New Submission		page	ge - ot				
V2203L-DHET   33.4@1800   31.0   12.5   101.0@1600   31.7   11.3   EM     V2203L-DHET   37.8@2200   29.5   14.5   93.7@1800   29.3   11.8   EM     V2203L-DHET   37.8@2200   29.5   14.5   93.7@1800   29.3   11.8   EM     V2203L-DHET   32.1@1800   30.0   12.1   93.5@1500   29.7   10.0   EM     V2203L-DHET   32.1@1800   30.0   11.4   93.5@1500   29.7   10.0   EM     V2203L-DHET   30.3@1700   30.0   11.4   93.5@1500   29.7<	1.Engine Code		3.BHP@RPM (SAE Gross)	4.Fuel Rate: mm/stroke @ peak HP (for diesel only)	5	6. Torque @ RPM (SEA Gross)	7.Fuel Rate: mm/stroke@peak torque	8.Fuel Rate: (lbs/hr)@peak torque	9.Emission Control b Device Per SAE J1930
V2203L-Di-ET   37.8@2200   29.5   14.5   93.7@1800   29.3   11.8   EM     V2203L-Di-ET   37.8@2200   29.5   14.5   93.7@1800   29.3   11.8   EM     V2203L-Di-ET   32.1@1800   30.0   12.1   93.5@1500   29.7   10.0   EM     V2203L-Di-ET   32.1@1800   30.0   11.4   93.5@1500   29.7   10.0   EM     V2203L-Di-ET   30.3@1700   30.0   11.4   93.5@1500   29.7   10.0   EM	ET01	V2203L-DI-ET	33.4@1800	31.0	12.5	101.0@1600	31.7	11.3	
V2203L-DI-ET 37.8@2200 29.5 14.5 93.7@1800 29.3 11.8   V2203L-DI-ET 32.1@1800 30.0 12.1 93.5@1500 29.7 10.0   V2203L-DI-ET 32.1@1800 30.0 12.1 93.5@1500 29.7 10.0   V2203L-DI-ET 30.3@1700 30.0 11.4 93.5@1500 29.7 10.0   V2203L-DI-ET 30.3@1700 30.0 11.4 93.5@1500 29.7 10.0   V2203L-DI-ET 30.3@1700 30.0 11.4 93.5@1500 29.7 10.0	ET02	V2203L-DI-ET	37.8@2200	29.5	14.5	93.7@1800	29.3	11.8	Ī
V2203L-DI-ET 32.1@1800 30.0 12.1 93.5@1500 29.7 10.0   V2203L-DI-ET 32.1@1800 30.0 12.1 93.5@1500 29.7 10.0   V2203L-DI-ET 30.3@1700 30.0 11.4 93.5@1500 29.7 10.0   V2203L-DI-ET 30.3@1700 30.0 11.4 93.5@1500 29.7 10.0   V2203L-DI-ET 30.3@1700 30.0 11.4 93.5@1500 29.7 10.0	:T02e	V2203L-DI-ET	37.8@2200	29.5	14.5	93.7@1800	29.3	11.8	EM, Electronic
V2203-DHET   32.1@1800   30.0   12.1   93.5@1500   29.7   10.0     V2203L-DHET   30.3@1700   30.0   11.4   93.5@1500   29.7   10.0     V2203L-DHET   30.3@1700   30.0   11.4   93.5@1500   29.7   10.0	ET03	V2203L-DI-ET	32.1@1800	30.0	12.1	93.5@1500	29.7	10.0	EM
V2203L-DI-ET   30.3@1700   30.0   11.4   93.5@1500   29.7   10.0     V2203L-DI-ET   30.3@1700   30.0   11.4   93.5@1500   29.7   10.0	V2203L-DI-ET03e	V2203L-DI-ET	32.1@1800	30.0	12.1	93.5@1500	29.7	10.0	EM,Electronic
	V2203L-DI-ET04	V2203L-DI-ET	30.3@1700	30.0	11.4	93.5@1500	29.7	10.0	EM
	ET04e	V2203L-DI-ET	30.3@1700	30.0	11.4	<b>93.5@1500</b>	29.7	10.0	EM,Electronic
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