California Environmental Protection Agency AIR RESOURCES BOARD	KUBOTA CORPORATION	EXECUTIVE ORDER U-R-025-0136 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)
2004	4KBXL01.5BCD	1.123, 1.498	Diesel	5000
SPECIAL FEATURES & EMISSION CONTROL SYSTEMS			**TYPICAL EQUIPMENT APPLICATION**	
Indirect Diesel Injection			Compressor, 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 2	STD	N/A	N/A	7.5	5.5	0.60	20	15	50
		CERT	--	--	4.9	1.3	0.31	5	3	10

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 14TH day of August 2003.

Allen Lyons, Chief
Mobile Source Operations Division

Engine Model Summary Form

attachment 1 of 1

U-R-025-0136

Manufacturer: **KUBOTA Corporation**

Engine category: **Nonroad CI**

EPA Engine Family: **4KBXL01.5BCD**

Mfr Family Name: **N/A**

Process Code: **Running Change**

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-ES01	D1105-ES	26.4@3000	23.5	11.8	54.5@1700	25.9	7.4	~~N/A~~
D1105-ES02	D1105-ES	26.0@3000	23.2	11.7	52.7@2200	25.1	9.3	~~N/A~~
D1105-ES03	D1105-ES	24.3@2800	22.6	10.6	51.6@2200	24.3	9.0	~~N/A~~
V1505-ES01	V1505-ES	35.5@3000	23.2	15.6	72.2@2200	25.1	12.3	~~N/A~~
V1505-ES02	V1505-ES	33.5@2850	22.5	14.3	69.4@2100	23.8	11.2	~~N/A~~
V1505-ES03	V1505-ES	33.5@2800	22.8	14.3	72.5@1700	24.8	9.4	~~N/A~~
V1505-ES04	V1505-ES	27.6@2300	22.2	11.4	72.5@1600	25.7	9.2	~~N/A~~
V1505-ES05	V1505-ES	28.4@2400	21.8	11.7	70.7@1600	24.4	8.7	~~N/A~~
V1505-ES06	V1505-ES	28.4@2400	21.8	11.7	64.0@1900	21.8	9.3	~~N/A~~
V1505-ES07	V1505-ES	26.0@2200	22.4	11.0	65.3@1600	23.5	8.4	~~N/A~~
V1505-ES08	V1505-ES	26.0@2100	23.3	10.9	69.0@1500	24.7	8.3	~~N/A~~
V1505-ES09	V1505-ES	24.8@2000	23.6	10.6	70.9@1500	25.2	8.5	~~N/A~~
V1505-ES10	V1505-ES	24.4@2000	23.2	10.4	69.8@1500	24.8	8.3	~~N/A~~
V1505-ES11	V1505-ES	28.2@2600	20.5	11.9	68.2@1600	24.2	8.7	~~N/A~~
V1505-ES12	V1505-ES	31.0@2600	22.0	12.8	72.2@1700	25.1	9.5	~~N/A~~
V1505-ES13	V1505-ES	28.2@2600	20.5	11.9	66.5@1600	23.6	8.4	~~N/A~~
V1505-ES14	V1505-ES	29.6@2700	21.6	13.0	67.9@1900	24.8	10.5	~~N/A~~