

F. J. J. J.

 AIR RESOURCES BOARD	KUBOTA CORPORATION	EXECUTIVE ORDER U-R-025-0071
		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-45-9;

IT IS ORDERED AND RESOLVED: That the following compression-ignition engine and emission control system 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)
2002	2KBXL02.2FCD	1.647, 2.197	Diesel	5000
SPECIAL FEATURES & EMISSION CONTROL SYSTEMS			TYPICAL EQUIPMENT APPLICATION	
Indirect Diesel Injection			Loader, Tractor, 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 1	STD	N/A	N/A	9.5	5.5	0.80	20	15	50
		CERT	--	--	6.0	1.1	0.42	6	6	11

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 28th day of November 2001.


 R. B. Summerfield, Chief
 Mobile Source Operations Division

Engine Model Summary Form

U-R-25-71

Attachment

Manufacturer: KUBOTA Corporation
Engine category: Nonroad CI
EPA Engine Family: 2KBXL02.2FCD
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
D1703-E1	D1703-E	36.5@2800	33.3	15.6	81.8@1700	38.0	10.8	N/A
D1703-E2	D1703-E	34.5@2700	31.9	14.4	81.8@1500	37.9	9.5	N/A
D1703-E3	D1703-E	31.9@2400	32.2	13.0	78.2@1550	35.6	9.3	N/A
D1703-E4	D1703-E	29.4@2200	32.0	11.8	79.1@1600	36.0	9.7	N/A
D1703-M-E1	D1703-M-E	36.7@2800	33.0	15.5	82.4@1700	37.9	10.8	N/A
V2203-M-E1	V2203-M-E	48.8@2800	32.1	20.1	110.0@1700	37.3	14.2	N/A
V2203-M-E2	V2203-M-E	38.2@2250	30.0	15.1	106.9@1600	36.4	13.0	N/A
V2203-E1	V2203-E	48.4@2800	32.3	20.2	108.1@1700	37.0	14.1	N/A
V2203-E2	V2203-E	43.9@2600	30.7	17.8	108.1@1500	37.1	12.4	N/A
V2203-E3	V2203-E	42.5@2400	31.9	17.1	105.0@1500	35.6	11.9	N/A
V2203-E4	V2203-E	42.5@2400	31.9	17.1	101.9@1700	33.9	12.9	N/A
V2203-E5	V2203-E	42.5@2400	31.9	17.1	101.0@1700	33.4	12.7	N/A
V2203-E6	V2203-E	41.7@2300	32.6	16.8	105.9@1600	36.1	12.9	N/A
V2203-E7	V2203-E	38.9@2200	31.3	15.4	97.9@1600	31.9	11.4	N/A
V2203-E8	V2203-E	38.9@2200	31.3	15.4	102.3@1600	34.3	12.3	N/A
V2203-E9	V2203-E	37.3@2100	31.4	14.7	101.0@1500	33.4	11.2	N/A
V2203-E10	V2203-E	48.4@2800	32.3	20.2	106.4@1600	36.0	12.9	N/A
V2203-E11	V2203-E	45.6@2700	31.2	18.8	107.7@1500	37.0	12.4	N/A
V2203-E12	V2203-E	43.9@2600	30.7	17.8	103.6@1700	35.0	13.3	N/A
V2203-E13	V2203-E	46.9@2650	32.5	19.3	106.4@1700	36.0	13.7	N/A
V2203-E14	V2203-E	34.9@2000	30.4	13.6	96.9@1600	32.1	11.5	N/A
V2203-E15	V2203-E	44.0@2450	32.3	17.7	104.1@1600	35.2	12.6	N/A
V2203-E16	V2203-E	36.9@2200	29.8	14.7	105.5@1500	35.8	12.0	N/A