

KUBOTA CORPORATION

EXECUTIVE ORDER U-R-025-0064 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	2KBXL01.5FCD	1.499	Diesel	5000
SPECIAL	FEATURES & EMISSION	CONTROL SYSTEMS	TYPICAL EQUIPMENT	
	Indirect Diesel Inje	ection	Mower	

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	EXHAUST (g/kw-h	ır)		OF	ACITY (%	•)
POWER CLASS	STANDARD CATEGORY		HC	NOx	NMHC+Nox	со	PM	ACCEL	LUG	PEAK
19 < KW < 37	Tier 1	STD	N/A	N/A	9.5	5.5	0.80	20	15	50
10 _ 10.		CERT		<u> </u>	7.1	1.0	0.28	4	4	8

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 November 2001.

R. B. Summerfield, Chief

Mobile Source Operations Division

Engine Model ummary Form

Manufacturer: KUBOTA Corporation

Engine category: Nonroad CI

EPA Engine Family. 2KBXL01.5FCD

Mfr Family Name: N/A

• Process Code: New Submission

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9.Emission Control Device Per SAE J1930		AM	₹	-∀/}\	-\ \ \\		er e	The state of the s				The state of the s	
8.Fuel Rate: 9.f (lbs/hr)@peak torque Devi	8.7 lp1	8.0	8.0	0.6	8.4 √		Manufacture and the first term of the second					AND THE PARTY OF T	
	ω	8	ω	O			Martin common combita combita de la					A THE PARTY OF THE	
7.Fuel Rate: mm/stroke@peak torque	34.4	32.0	30.0	33.6	33.3		to the first section of the section	Andrea em heura i menuri i e-per em escritori en escritori en escritori en escritori en escritori en escritori	Ale refer to the control of the confidence of th			terminat for command to difference committee or control the quantitation of the committee o	
6.Torque @ RPM (SEA Gross)	75.1@1500	69.9@1500	65.5@1600	73.5@1600	72.7@1500		th eth order amount more manufacture methods and						
5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only)	12.9	10.6	12.0	14.1	11.1		mitten entre et establis de modern en menor en modern en en			A contraction of the contraction			
4.Fuel Rate: mm/stroke @ peak HP (for diesel only)	28.6	30.0	27.6	30.0	28.7		Market of the Control						
3.BHP@RPM (SAE Gross)	31.4@2700	24.8@2100	29.5@2600	32.9@2800	27.4@2300		as talkada di sala di kanan di maga ta sala di manan talka di manan di manan di manan di manan di manan di man						
2.Engine Model	D1503-E	D1503-E	D1503-E	D1503-E	D1503-M-E		ement in the state of the state						
1.Engine Code	D1503-E1	D1503-E2	D1503-E3	D1503-E4	D1503-M-E1								

Manufacturer: KUBOTA Corporation

Engine category: Nonroad Cl

EPA Engine Family. 2KBXL01.5FCD

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Mfr Family Name: N/A
Process Code: New Submission Running Charge

And the Charge

Attachment 10%

Running Change

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	30.2	MC1 @6.77	13.8	30.5	33.3@2700	D1503-M-E	D1503-M-E2
91 N/A	36.7	77 00 4500		20.7	27.4@2300	D1503-M-E	D1503-M-E1
8.4 N/A	<u>အ</u> အ.အ	72 7@1500	<u>.</u>	28.7		0 0 0	V 1303-E4
9.0	33.6	73.5@1600	14.1	30.0	32.9@2800	D1503-F	D1503_E/
	3 6	00.0@1000	0.21	27.6	29.5@2600	D1503-E	D1503-E3
8.0 N/A	30 O	65 F@1600) ((77.000.17	D 1000-E	D1503-E2
0.0	32.0	69.9@1500	10.6	30.0	24 8@2100	Janos II	
N/A	3			20.0	31.4@2/00	D1503-E	D1503-E1
8.7 N/A	34.4	75.1@1500	130	20 6		. (!	C
8.Fuel Rate: 9.Emission Control (lbs/hr)@peak torque Device Per SAE J1930	7.Fuel Rate: mm/stroke@peak torque (lbs/t	6.Torque @ RPM (SEA Gross)	5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only)	4.Fuel Rate: mm/stroke @ peak HP (for diesel only)	3.BHP@RPM (SAE Gross)	2.Engine Model	1.Engine Code