

KUBOTA CORPORATION

EXECUTIVE ORDER U-R-025-0168-1 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	4KBXL.898KCB	0.599, 0.898	Diesel					
SPECIAL	FEATURES & EMISSION	CONTROL SYSTEMS	TYPICAL EQUIPMENT APPLICATION					
Ele	Indirect Diesel Inje ectronic Control Module (ction, some models)	Riding Mower, 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			Ε	XHAUST (g/kW-		OPACITY (%)			
			нс	NOx	NMHC+Nox	co	PM	ACCEL	LUG	PEAK
8 ≤ kW < 19	Tier 1	STD	N/A	N/A	9.5	6.6	0.80	20	15	50
- 1900		CERT			5.9	2.5	0.29	9	8	14

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.

This Executive Order hereby supersedes Executive Order U-R-025-0168 dated January 6, 2004

Executed at El Monte, California on this

llen Lons Chief

Mobile Source Operations Division

day of March 2004.

Engine Model St., mary Form

Attachment 1 - 3 1 U-A-025-0168-1

Manufacturer: KUBOTA Corporation

Engine category: Nonroad Cl

EPA Engine Family: 4KBXL.898KCB

Mfr Family Name: N/A

Process Code: Running Change

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af Ra peak	8.2	7.9	9.9	7.7	5.6	8.5	5.9	5.5	5.8	6.4	1		1.7	
8.Fuel Rate: hr)@peak to			fa.				2.5							
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7.Fuel Rate: mm/stroke@реак torque	10		_						-			1	2,	
7.Fuel Rate: n/stroke@pe torque	20.5	19.7	19.7	19,2	18.5	19.6	22.1	20.5	20.0	19.0				
7.Fu n/str tc					7				100		- 4			-
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6.Torque @ RPM (SEA Gross)	42.0@2400	41.4@2400	41.4@2000	40.3@2400	40.3@1800	41.2@2600	30.2@2400	28.0@2400	27.9@2600	300				
forque @ RF (SEA Gross)	02	@2	@2	@2	@	@2	02	02	02	26.6@2300		j		1
orqu	12.0	4.1	11.4	10.3	10.3	11.2	30.2	28.0	7.9	9.93				
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5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only)		-	<u> </u>			-								
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4.Fuel Rate: mm/stroke @ peak (for diesel only)	18.4	17.5	7.5	17.0	17.5	18.3	19.6	18.4	18.9	17.8				
4.Fue Iroke or die	_	_	-	_	Ţ.		7	_	-	_				
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3.BHP@HPM (SAE Gross)	21.7@3200	21.6@3200	21.6@3200	20.9@3200	16.5@2300	24.8@3600	15.8@3200	14.5@3200	16.8@3600	12.7@2800				
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