

## **KUBOTA CORPORATION**

EXECUTIVE ORDER U-R-025-0226 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)				
2006	6KBXL.898KCB	0.599, 0.898	Diesel					
	FEATURES & EMISSION		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			E	XHAUST (g/kW-		OPACITY (%)			
			нс	NOx	NMHC+NOx	CO	PM	ACCEL	LUG	PEAK
8 <u>&lt;</u> kW < 19	Tier 2	STD	N/A	N/A	7.5	6.6	0.80	20	15	50
		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.

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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 \_\_\_\_\_30<sup>th</sup> day of December 2005.

Allen Lyons, Chief

Mobile Source Operations Division

## **Engine Model Summary Form**

Athelinet U-A.025-6726

Manufacturer: KUBOTA Corporation

Engine category: Nonroad CI

EPA Engine Family: 6KBXL.898KCB

Mfr Family Name: N/A

Process Code: Running Change

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9.Emission Control Device Per SAE J1930	HVA I	X.	MA.	¥	MA	¥ <del>!</del> ¥	A.M	<b>₩</b>	XX	X.	***************************************	₽ <b>-47</b> N	Electronic EC	<b>★</b> ₹
8.Fuel Rate: (lbs/hr)@peak torque	8:5	7.9	9.9	7.7	5,6	6.5	6.1	7.9	5.9	5.4	5.8	4.9	4.9	4.6
7.Fuel Kate: mm/stroke@peak torque	19:5	19.7	19.7	19.2	18:5	17.5	161	19.6	22.1	20.1	20.0	19.0	19.0,	19.4
6.Torque @ RPM (SEA Gross)	41.4@2600	41.4@2400	41.4@2000	40.3@2400	40.3@1800	37.0@2200	40.3@1900	40.6@2400	30.2@2400	28.0@2400	27.9@2600	26.6@2300	26.6@2300	26.8@2100
5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only)		9.4	9.4	9.1	2.9	6.8	6.8	10.6	7.0	6.4	7.6	5.6	5.6	2
4.Fuel Rate: mm/stroke @ peak HP (for diesel only)	18.4	17.5	17.5	17.0	17.5	16.9	16.9	18.6	19.6	18.0	18.9	17.8	17.8	174
3.BHP@RPM (SAE Gross)	24.8@3600	21.6@3200	21.6@3200	20.9@3200	16.5@2300	16.2@2400	16.2@2400	23.3@3400	15.8@3200	14.5@3200	16.8@3600.	12.7@2800	12.7@2800	11.7@2600
2.Engine Model	D902-ES	D902-ES		D902-ES	D902-ES	D902-ES	D902-ES	D902-ES	Z602-ES	Z602-ES	Z602-ES	Z602-ES	Z602-ES	Z602-ES
1.Engine Code	D902-ES01	D902-ES02	D902-ES03	D902-ES04	D902-ES05	D902-ES06	D902-ES07	D902-ES08	Z602-ES01	Z602-ES02	Z602-ES03	Z602-ES04	Z602-ES04e	Z602-ES05