

KUBOTA CORPORATION

EXECUTIVE ORDER U-R-025-0253 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	6KBXL02.0EAD	1.999	Diesel	8000			
SPECIAL FEATURES & EMISSION CONTROL SYSTEMS			TYPICAL EQUIPMENT APPLICATION				
(Direct Diesel Injection, Tu Smoke Puff Limiter (Son	irbocharger, ne Models)	Crane				

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 STANDARD CATEGORY		EXHAUST (g/kW-hr)				OPACITY (%)			
POWER CLASS			нс	NOx	NMHC+NOx	co	PM	ACCEL	LUG	PEAK
37 ≤ kW < 75	Tier 2	STD	N/A	N/A	7.5	5.0	0.40	20	15	50
		CERT			6.4	1.1	0.32	7	2	23

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 December 2005.

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Mobile Source Operations Division

Engine Model Summary Form

Manufacturer: KUBOTA Corporation

Engine category: Nonroad CI

EPA Engine Family. 6KBXL02.0EAD

Mfr Family Name: N/A

Process Code: Running Change

Attachment E0#4-R-025-6253

9.Emission Control Device Per SAE J1930	NA DOT, IT] JdS	N/A	SPL	A/A	SPL	NA Z
9.Emissi Je Device Per	Z	S	Z	S	Z	S	2
8.Fuel Rate: (lbs/hr)@peak torque	15.5	15.5	15.4	15.4	15.4	15.4	14.6
7.Fuel Rate: mm/stroke@peak torque	38.4	38.4	38.2	38.2	38.2	38.2	36.3
6.Torque @ RPM (SEA Gross)	125.4@1800	125.4@1800	125.1@1800	125.1@1800	125.1@1800	125.1@1800	115.8@1800
5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only)	20.6	20.6	22.9	22.9	20.1	20.1	18.5
4.Fuel Rate: mm/stroke @ peak HP (for diesel only)	36.8	36.8	36.6	36.6	36.0	36.0	34.5
3.BHP@RPM (SAE Gross)	54.7@2500	54.7@2500	59.0@2800	59.0@2800	53.0@2500	53.0@2500	48.9@2400
2.Engine Model	V2003-M-DI-T-ES	V2003-M-DI-T-ES	V2003-M-DI-T-ES	V2003-M-DI-T-ES	V2003-M-DI-T-ES	V2003-M-DI-T-ES	V2003-M-DI-T-ES
1.Engine Code	V2003-M-DI-T-ES01 V2003-M-DI-T-ES	/2003-M-DI-T-ES01b V2003-M-DI-T-ES	V2003-M-DI-T-ES02 V2003-M-DI-T-ES	/2003-M-DI-T-ES02b V2003-M-DI-T-ES	V2003-M-DI-T-ES03 V2003-M-DI-T-ES	/2003-M-DI-T-ES03b V2003-M-DI-T-ES	/2003-M-DI-T-ES04