

KUBOTA Corporation

EXECUTIVE ORDER U-R-025-0432 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)
2010	AKBXL01.5FAD	1.499	Diesel	5000
SPECIAL	FEATURES & EMISSION	CONTROL SYSTEMS	TYPICAL EQUIPMENT	APPLICATION
ln	direct Diesel Injection, T Smoke Puff Limiter (Sor	urbocharger, ne Models)	Tractor, Compressor, (Other Industrial E	Generator Set, quipment

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		EXHAUST (g/kw-hr) OPACITY (%)							6)
POWER	STANDARD CATEGORY		нС	NOx	NMHC+NOx	co	PM	ACCEL	LUG	PEAK
19 <u><</u> kW < 37	Tier 4 Interim	STD	N/A	N/A	7.5	5.5	0.30	20	15	50
		CERT			5.8	0.8	0.23	5	4	10

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 2009.

Annette Hebert, Chief Mobile Source Operations Division

Engine Model Summary Form

KUBOTA Corporation Manufacturer:

Nonroad Cl Engine category:

AKBXL01.5FAD EPA Engine Family.

Mfr Family Name: N/A

New Submission Process Code:

Attachment

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U-R-025-0432 Date: 12/16/2009

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8.Fuel Rate: 9.Emission Control (lbs/hr)@peak torque Device Per SAE J1930	EM	EM	EM,SPL	EM	EM,SPL	EM	EM,SPL	E	EM,SPL	
8.Fuel Rate: (lbs/hr)@peak torque	13.2	11.4	11.4	11.4	11.4	11.4	11.4	11.4	11.4	
7.Fuel Rate: mr/stroke@peak torque	46.2	42.5	42.5	42.5	42.5	42.5	42.5	42.5	42.5	
6.Torque @ RPM (SEA Gross)	101.4@1700	92.6@1600	92.6@1600	92.6@1600	92.6@1600	92.6@1600	92.6@1600	92.6@1600	92.6@1600	
5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only)	18.8	18.4	18.4	17.5	17.5	16.7	16.7	15.8	15.8	
4.Fuel Rate: mm/stroke @ peak HP (for diesel only)	40.0	39.2	39.2	38.7	38.7	38.2	38.2	37.8	37.8	
3.BHP@RPM (SAE Gross)	44.7@2800	42.2@2800	42.2@2800	40.8@2700	40.8@2700	39.2@2600	39.2@2600	37.7@2500	37.7@2500	
2.Engine Model	D1503-M-T-ET	D1503-M-T-ET	D1503-M-T-ET	D1503-M-T-ET	D1503-M-T-ET	D1503-M-T-ET	D1503-M-T-ET	D1503-M-T-ET	D1503-M-T-ET	
1.Engine Code	D1503-M-T-ET01	D1503-M-T-ET02	D1503-M-T-ET02b	D1503-M-T-ET03	D1503-M-T-ET03b	D1503-M-T-ET04	D1503-M-T-ET04b	D1503-M-T-ET05	D1503-M-T-ET05b	