

## **KUBOTA Corporation**

EXECUTIVE ORDER U-R-025-0833

New Off-Road Compression-Ignition Engines

Pursuant to the authority vested in California 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-14-012;

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)		
2019	KKBXL02.4EMD	2.435	Diesel			
SPECIAL FEATURES & EMISSION CONTROL SYSTEMS			TYPICAL EQUIPMENT APPLICATION			
Electroni Cooler Re	c Direct Injection, Turboo, F, Electronic Control Mod ecirculation, Diesel Oxida	charger, Charge Air ule, Exhaust Gas ition Catalyst	Loader, Tractor, Pump, Compressor, Other Industrial Equipment			

The engine models and codes are attached.

The following are the exhaust certification standards (STD) and certification levels (CERT) for non-methane hydrocarbon (NMHC), 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):

POWER CLASS	EMISSION STANDARD CATEGORY		EXHAUST (g/kw-hr)				OPACITY (%)			
			NMHC	NOx	NMHC+NOx	co	PM	ACCEL	LUG	PEAK
37 ≤ kW < 56	Tier 4 Final	STD	N/A	N/A	4.7	5.0	0.03	N/A	N/A	N/A
		CERT			3.7	0.6	0.02			

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

Annette Hebert, Chief

Emissions Compliance, Automotive Regulations and Science Division

day of November 2018.

## **Engine Model Summary Form**

E0#U-R-0>5-0833 Date: 10/22/2018

Manufacturer.

**KUBOTA Corporation** 

Engine category:

Nonroad CI

EPA Engine Family:

KKBXL02.4EMD

Mfr Family Name:

N/A

Process Code:

New Submission

Attachment page 1 of 1

4. Fuel Rate: 5. Fuel Rate: 7. Fuel Rate: 8. Fuel Rate: 3.BHP@RPM 6. Torque @ RPM 9. Emission Control 1.Engine Code 2. Engine Model mm/stroke @ peak HP (lbs/hr) @ peak HP mm/stroke@peak (lbs/hr)@peak (SAE Gross) (SEA Gross) Device Per SAE J1930 (for diesel only) (for diesels only) torque torque EM, DFI, TC, EGR, CAC, ECM, DOC V2403-CR-TI-EF01 V2403-CR-TI-EF 67.5@2700 44.7 27.0 151.4@1600 46.6 16.7 42.9 EM, DFI, TC, EGR, CAC, ECM, DOC V2403-CR-TI-EF02 V2403-CR-TI-EF 64.2@2700 25.9 144.3@1600 44.1 15.8 V2403-CR-TI-EF03 V2403-CR-TI-EF 57.1@2400 41.7 22.4 144.3@1500 44.1 14.8 EM, DFI, TC, EGR, CAC, ECM, DOC EM, DFI, TC, EGR, CAC, ECM, DOC V2403-CR-TI-EF04 V2403-CR-TI-EF 52.3@2200 40.5 19.9 144.3@1500 44.1 14.8