

KUBOTA CORPORATION

EXECUTIVE ORDER U-R-025-0952

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-19-095;

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)					
2021	MKBXL02.432D	1.826, 2.435	Diesel	8000					
SPECIAL	FEATURES & EMISSION O	CONTROL SYSTEMS	TYPICAL EQUIPMENT APPLICATION						
Gas Re	ic Direct Injection, Turb circulation, Charge Air I Module, Periodic Trap Oxidation Catal	Cooler, Electronic Oxidizer, Diesel	Loader, Tractor, Pump, Compressor, Asphalt Finisher, Carrier, Construction Machinery, Forklift, Garden Tractor, Mini Backhoe, Mower, Roller, Skid Steer Loader, Nonroad Sweeper, Wood Chipper, 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):

RATED	EMISSION			I	EXHAUST (g/kw-l		OPACITY (%)				
POWER CLASS	STANDARD CATEGORY		NMHC NOx		NMHC+NOx	со	PM	ACCEL	LUG	PEAK	
19 ≤ kW < 56	Tier 4 Final	STD	N/A	N/A	4.7	5.0	0.03	N/A	N/A	N/A	
		CERT			3.6	0.04	0.000				

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).

BE IT FURTHER RESOLVED: That for the listed engine models which include engines from different power categories in the same engine family, the manufacturer is complying with the more stringent set of standards from the 37 ≤ kW < 56 power category in conformance with the incorporated Section 1039.230 (e) of the "California Exhaust Emission Standards and Test Procedures for New 2011 and Later Tier 4 Off-Road Compression Ignition Engines, Part 1-D" adopted October 20, 2005 and last amended October 25, 2012.

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 on this <u>25th</u> day of November 2020.

Allen Lyons, Chief

Emissions Certification and Compliance Division

Attachment: Engine Models EO #: U-R-025-0952 Family: MKBXL02.432D Attachment Last Revised: 11/20/2020

Model	Code	Trim	Config	Displacement	Displacement - Units	Peak Power	Peak Power - Units	Peak Power - Speed (rpm)	Peak Power - Fueling	Peak Power - Fuel Units	Peak Torque	Peak Torque - Units	Peak Torque - Speed (rpm)	- Peak Torque - Fuel	- Peak Torque - Fuel Units	OBD		Special	Notes
																	GHG		
D1803-CR-TI-EW	D1803-CR-TI-EW01		I-3	1.826	Liters	41.4	kilowatt	2700	46.7	mm3/stroke	180	N-m	1600	54.2	mm3/stroke	N/A	N/A	N/A	N/A
D1803-CR-TI-EW	D1803-CR-TI-EW02		I-3	1.826	Liters	37.4	kilowatt	2400	46.9	mm3/stroke	180	N-m	1500	54.2	mm3/stroke	N/A	N/A	N/A	N/A
D1803-CR-TI-EW	D1803-CR-TI-EW03		I-3	1.826	Liters	35	kilowatt	2200	46.9	mm3/stroke	180	N-m	1500	54.2	mm3/stroke	N/A	N/A	N/A	N/A
V2403-CR-TI-EW	V2403-CR-TI-EW01		1-4	2.435	Liters	54.6	kilowatt	2700	44.7	mm3/stroke	257.3	N-m	1600	55.7	mm3/stroke	N/A	N/A	N/A	N/A
V2403-CR-TI-EW	V2403-CR-TI-EW02		1-4	2.435	Liters	54.6	kilowatt	2700	44.7	mm3/stroke	245	N-m	1600	53.4	mm3/stroke	N/A	N/A	N/A	N/A
V2403-CR-TI-EW	V2403-CR-TI-EW03		1-4	2.435	Liters	49.9	kilowatt	2400	45.2	mm3/stroke	245	N-m	1500	53.4	mm3/stroke	N/A	N/A	N/A	N/A
V2403-CR-TI-EW	V2403-CR-TI-EW04		1-4	2.435	Liters	46.4	kilowatt	2200	45.4	mm3/stroke	245	N-m	1500	53.4	mm3/stroke	N/A	N/A	N/A	N/A
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