

## **KUBOTA CORPORATION**

## **EXECUTIVE ORDER U-R-025-1050**

New Off-Road Compression-Ignition Engines Page 1 of 1

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)						
2023	PKBXL.898KCB	0.599, 0.899	Diesel	3000						
SPECIAL	FEATURES & EMISSION C	CONTROL SYSTEMS	TYPICAL EQUIPMENT APPLICATION							
	Indirect Diesel Inje	ection	Loader, Tractor, Pump, Compressor, Generator Set, Auxiliary Power Unit, Forklift, Garden Tractor, Mini Backhoe, Mower, Roller, Skid Steer Loader, Nonroad Sweeper, Utility Vehicle, Welder, Lift, Excavator							

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 POWER CLASS	EMISSION			ı	EXHAUST (g/kw-l	OPACITY (%)				
	STANDARD CATEGORY		NMHC	NOx	NMHC+NOx	СО	PM	ACCEL	LUG	PEAK
kW < 19	Tier 4 Final	STD	N/A	N/A	7.5	6.6	0.40	20	15	50
		CERT			5.6	2.0	0.31	8	6	13

**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 8 ≤ kW < 19 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 \_5th day of October 2022.

Robin U. Lang, Chief

**Emissions Certification and Compliance Division** 

Jolin U. Lang

Attachment: Engine Models EO #: U-R-025-1050 Family: PKBXL.898KCB Attachment Last Revised: 9/23/2022

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					Displacement -		Peak Power -	Peak Power -	Peak Power -	Peak Power - Fue	el .	Peak Torque -	Peak Torque -	Peak Torque -	Peak Torque -				
Model	Code	Trim	Config	Displacement	Units	Peak Power	Units	Speed (rpm)	Fueling	Units	Peak Torque	Units	Speed (rpm)	Fuel	Fuel Units	OBD	GHG	Special	Notes
D0.9A-EF	D0.9A-EF08		I-3	0.899	Liters	11.8	kilowatt	2300	17.4	mm3/stroke	51.3	N-m	1800	18.0	mm3/stroke	N/A	N/A	N/A	N/A
D902-EF	D902-EF01		I-3	0.899	Liters	18.2	kilowatt	3600	18.4	mm3/stroke	55.3	N-m	2600	19.5	mm3/stroke	N/A	N/A	N/A	N/A
D902-EF	D902-EF01e		I-3	0.899	Liters	18.2	kilowatt	3600	18.4	mm3/stroke	55.3	N-m	2600	19.5	mm3/stroke	N/A	N/A	N/A	N/A
D902-EF	D902-EF02		I-3	0.899	Liters	17.1	kilowatt	3400	18.6	mm3/stroke	54.2	N-m	2400	19.6	mm3/stroke	N/A	N/A	N/A	N/A
D902-EF	D902-EF03		I-3	0.899	Liters	15.9	kilowatt	3200	17.5	mm3/stroke	55.3	N-m	2400	19.7	mm3/stroke	N/A	N/A	N/A	N/A
D902-EF	D902-EF04		I-3	0.899	Liters	15.3	kilowatt	3000	18.0	mm3/stroke	54.9	N-m	2000	19.6	mm3/stroke	N/A	N/A	N/A	N/A
D902-EF	D902-EF05		I-3	0.899	Liters	14.9	kilowatt	3000	17.5	mm3/stroke	54.6	N-m	2000	19.4	mm3/stroke	N/A	N/A	N/A	N/A
D902-EF	D902-EF06		I-3	0.899	Liters	13.2	kilowatt	2600	17.3	mm3/stroke	53.5	N-m	2200	18.8	mm3/stroke	N/A	N/A	N/A	N/A
D902-EF	D902-EF07		I-3	0.899	Liters	11.9	kilowatt	2400	16.9	mm3/stroke	53.8	N-m	1900	19.1	mm3/stroke	N/A	N/A	N/A	N/A
D902-EF	D902-EF08		I-3	0.899	Liters	11.8	kilowatt	2300	17.4	mm3/stroke	51.3	N-m	1800	18.0	mm3/stroke	N/A	N/A	N/A	N/A
D902-EF	D902-EF09		I-3	0.899	Liters	15.9	kilowatt	3200	17.5	mm3/stroke	55.3	N-m	2000	19.7	mm3/stroke	N/A	N/A	N/A	N/A
Z602-EF	Z602-EF01		I-2	0.599	Liters	12.4	kilowatt	3600	19.0	mm3/stroke	37.9	N-m	2200	20.2	mm3/stroke	N/A	N/A	N/A	N/A
Z602-EF	Z602-EF02		I-2	0.599	Liters	12.3	kilowatt	3600	18.9	mm3/stroke	37.2	N-m	2600	20.0	mm3/stroke	N/A	N/A	N/A	N/A
Z602-EF	Z602-EF03		I-2	0.599	Liters	10.6	kilowatt	3200	18.0	mm3/stroke	37.4	N-m	2400	20.1	mm3/stroke	N/A	N/A	N/A	N/A
Z602-EF	Z602-EF04		I-2	0.599	Liters	9.4	kilowatt	2800	17.8	mm3/stroke	35.6	N-m	2300	19.0	mm3/stroke	N/A	N/A	N/A	N/A
Z602-EF	Z602-EF05		I-2	0.599	Liters	8.6	kilowatt	2600	17.4	mm3/stroke	35.9	N-m	2100	19.4	mm3/stroke	N/A	N/A	N/A	N/A
Z602-EF	Z602-EF06		I-2	0.599	Liters	7.9	kilowatt	2400	17.3	mm3/stroke	34.3	N-m	1900	17.9	mm3/stroke	N/A	N/A	N/A	N/A
Z602-EF	Z602-EF07		I-2	0.599	Liters	7.3	kilowatt	2200	17.4	mm3/stroke	34.2	N-m	1800	19.1	mm3/stroke	N/A	N/A	N/A	N/A
D902-EF	D902-EF08e		I-3	0.899	Liters	11.8	kilowatt	2300	17.4	mm3/stroke	51.3	N-m	1800	18.0	mm3/stroke	N/A	N/A	N/A	N/A