

KUBOTA CORPORATION

EXECUTIVE ORDER U-R-025-1033

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)				
2022	NKBXL03.8A5D	3.77	Diesel	8000				
SPECIAL	FEATURES & EMISSION (CONTROL SYSTEMS	TYPICAL EQUIPMENT APPLICATION					
Gas Re Contro Oxidatio	ic Direct Injection, Turb circulation, Charge Air I Module, Periodic Trap on Catalyst, Ammonia C elective Catalytic Reduc	Cooler, Electronic Oxidizer, Diesel Oxidation Catalyst,	Loader, Tractor, Carrier, Forklift, Ro Loader	iller, Skid Steer				

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				EXHAUST (g/kw-l	OPACITY (%)				
	STANDARD CATEGORY		NMHC	NOx	NMHC+NOx	СО	PM	ACCEL	LUG	PEAK
56 ≤ kW < 130	Tier 4 Final	STD	0.19	0.40	N/A	5.0	0.02	N/A	N/A	N/A
		CERT	0.04	0.20		0.2	0.002	-	-	

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 56 ≤ kW < 130 power categories 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>27th</u> day of November 2021.

Allen Lyons, Chief

Emissions Certification and Compliance Division

Attachment: Engine Models EO #: U-R-025-1033 Family: NKBXL03.8A5D Attachment Last Revised: 10/29/2021

					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
C3.8-CR-TI-EW	C3.8-CR-TI-EW04		1-4	3.770	Liters	81.8	kilowatt	2400	75.6	mm3/stroke	379.3	N-m	1500	84.9	mm3/stroke	N/A	N/A	N/A	N/A
C3.8-CR-TI-EW	C3.8-CR-TI-EW13		1-4	3.770	Liters	72.1	kilowatt	2400	67.1	mm3/stroke	330.0	N-m	1500	74.3	mm3/stroke	N/A	N/A	N/A	N/A
D3.8J-CR-TI-EW	D3.8J-CR-TI-EW03		1-4	3.770	Liters	85.1	kilowatt	2600	74.1	mm3/stroke	379.3	N-m	1500	84.9	mm3/stroke	N/A	N/A	N/A	N/A
D3.8J-CR-TI-EW	D3.8J-CR-TI-EW05		1-4	3.770	Liters	79.5	kilowatt	2200	79.2	mm4/stroke	379.3	N-m	1500	84.9	mm4/stroke	N/A	N/A	N/A	N/A
V3800-CR-TI-EW	V3800-CR-TI-EW02		1-4	3.770	Liters	87.2	kilowatt	2600	76.5	mm5/stroke	388.2	N-m	1500	87.5	mm5/stroke	N/A	N/A	N/A	N/A
V3800-CR-TI-EW	V3800-CR-TI-EW03		1-4	3.770	Liters	85.1	kilowatt	2600	74.1	mm6/stroke	379.3	N-m	1500	84.9	mm6/stroke	N/A	N/A	N/A	N/A
V3800-CR-TI-EW	V3800-CR-TI-EW04		1-4	3.770	Liters	81.8	kilowatt	2400	75.6	mm7/stroke	379.3	N-m	1500	84.9	mm7/stroke	N/A	N/A	N/A	N/A
V3800-CR-TI-EW	V3800-CR-TI-EW05		1-4	3.770	Liters	79.5	kilowatt	2200	79.2	mm8/stroke	379.3	N-m	1500	84.9	mm8/stroke	N/A	N/A	N/A	N/A
V3800-CR-TI-EW	V3800-CR-TI-EW06		1-4	3.770	Liters	85.1	kilowatt	2600	74.4	mm9/stroke	379.3	N-m	1500	85.2	mm9/stroke	N/A	N/A	N/A	N/A
V3800-CR-TI-EW	V3800-CR-TI-EW07		1-4	3.770	Liters	77.9	kilowatt	2600	68.4	mm10/stroke	346.1	N-m	1500	77.7	mm10/stroke	N/A	N/A	N/A	N/A
V3800-CR-TI-EW	V3800-CR-TI-EW08		1-4	3.770	Liters	84.4	kilowatt	2600	73.9	mm11/stroke	363.7	N-m	1500	81.7	mm11/stroke	N/A	N/A	N/A	N/A
V3800-CR-TI-EW	V3800-CR-TI-EW09		1-4	3.770	Liters	80.7	kilowatt	2600	70.9	mm12/stroke	351.7	N-m	1500	79.0	mm12/stroke	N/A	N/A	N/A	N/A
V3800-CR-TI-EW	V3800-CR-TI-EW10		1-4	3.770	Liters	78.8	kilowatt	2400	73.6	mm13/stroke	362.6	N-m	1500	81.5	mm13/stroke	N/A	N/A	N/A	N/A
V3800-CR-TI-EW	V3800-CR-TI-EW11		1-4	3.770	Liters	70.9	kilowatt	2600	62.8	mm14/stroke	313.7	N-m	1500	71.4	mm14/stroke	N/A	N/A	N/A	N/A
V3800-CR-TI-EW	V3800-CR-TI-EW12		1-4	3.770	Liters	69.0	kilowatt	2400	64.8	mm15/stroke	330.6	N-m	1500	74.9	mm15/stroke	N/A	N/A	N/A	N/A
V3800-CR-TI-EW	V3800-CR-TI-EW13		1-4	3.770	Liters	72.1	kilowatt	2400	67.1	mm16/stroke	330.0	N-m	1500	74.3	mm16/stroke	N/A	N/A	N/A	N/A
V3800-CR-TI-EW	V3800-CR-TI-EW14		1-4	3.770	Liters	70.8	kilowatt	2400	66.1	mm17/stroke	347.0	N-m	1500	77.7	mm17/stroke	N/A	N/A	N/A	N/A
V3800-CR-TI-EW	V3800-CR-TI-EW15		1-4	3.770	Liters	82.2	kilowatt	2600	71.5	mm18/stroke	355.3	N-m	1500	79.2	mm18/stroke	N/A	N/A	N/A	N/A
V3800-CR-TI-EW	V3800-CR-TI-EW16		1-4	3.770	Liters	72.4	kilowatt	2600	63.7	mm19/stroke	319.1	N-m	1500	72.0	mm19/stroke	N/A	N/A	N/A	N/A
V3800-CR-TI-EW	V3800-CR-TI-EW19		1-4	3.770	Liters	81.8	kilowatt	2400	76.1	mm20/stroke	379.3	N-m	1500	85.2	mm20/stroke	N/A	N/A	N/A	N/A
V3800-CR-TI-EW	V3800-CR-TI-EW20		1-4	3.770	Liters	76.4	kilowatt	2400	71.5	mm21/stroke	346.1	N-m	1500	77.7	mm21/stroke	N/A	N/A	N/A	N/A
V3800-CR-TI-EW	V3800-CR-TI-EW21		1-4	3.770	Liters	73.9	kilowatt	2600	66.9	mm22/stroke	327.7	N-m	1500	74.1	mm22/stroke	N/A	N/A	N/A	N/A
V3800-CR-TI-EW	V3800-CR-TI-EW22		1-4	3.770	Liters	66.6	kilowatt	2600	61.0	mm23/stroke	293.5	N-m	1500	67.1	mm23/stroke	N/A	N/A	N/A	N/A
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