CALIFORNIA AIR RESOURCES BOARD	KUBOTA Corporation	EXECUTIVE ORDER U-R-025-0822 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	KKBXL.719KCB	0.479, 0.719	Diesel	3000

SPECIAL FEATURES & EMISSION CONTROL SYSTEMS	TYPICAL EQUIPMENT APPLICATION
Indirect Diesel Injection	Loader, Tractor, Compressor, Generator Set, and 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 POWER CLASS	EMISSION STANDARD CATEGORY		EXHAUST (g/kW-hr)					OPACITY (%)		
			NMHC	NOx	NMHC+NOx	CO	PM	ACCEL	LUG	PEAK
kW < 19	Tier 4 Final	OPTIONAL STD	N/A	N/A	7.5	6.6	0.40	20	15	50
		CERT	--	--	4.9	2.6	0.26	11	13	15

BE IT FURTHER RESOLVED: That for the listed engine models, the manufacturer has complied with the more stringent set of standards from the various power categories in conformance with 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 I-D" adopted October 20, 2005 and last amended October 25, 2012.

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 16th day of November 2018.

Annette Hebert, Chief
Emissions Compliance, Automotive Regulations and Science Division

EO# U-R-025-0822

Date: 10/16/2018

Engine Model Summary Form

Attachment page 1 of 1

Manufacturer: **KUBOTA Corporation**
Engine category: **Nonroad CI**
EPA Engine Family: **KKBXL.719KCB**
Mfr Family Name: **N/A**
Process Code: **New Submission**

1.Engine Code	2.Engine Model	3.BHP@RPM (SAE Gross)	4.Fuel Rate: mm/stroke @ peak HP (for diesel only)	5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only)	6.Torque @ RPM (SEA Gross)	7.Fuel Rate: mm/stroke@peak torque	8.Fuel Rate: (lbs/hr)@peak torque	9.Emission Control Device Per SAE J1930
D722-EF01	D722-EF	19.7@3600	15.0	9.1	33.3@2600	16.3	7.1	EM, IFI
D722-EF01e	D722-EF	19.7@3600	15.0	9.1	33.3@2600	16.3	7.1	EM, IFI
D722-EF02	D722-EF	18.5@3400	14.5	8.3	31.7@2600	15.3	6.7	EM, IFI
D722-EF03	D722-EF	17.4@3200	14.3	7.7	30.8@2600	14.9	6.5	EM, IFI
D722-EF04	D722-EF	16.4@3200	13.7	7.4	32.6@2200	15.8	5.8	EM, IFI
D722-EF05	D722-EF	16.4@3000	14.1	7.1	33.3@2200	16.1	5.9	EM, IFI
D722-EF06	D722-EF	15.2@2950	13.3	6.6	31.5@2200	15.0	5.5	EM, IFI
D722-EF07	D722-EF	14.9@2900	13.3	6.5	30.4@2400	15.2	6.1	EM, IFI
D722-EF08	D722-EF	15.2@2800	13.9	6.5	31.6@2200	15.1	5.6	EM, IFI
D722-EF09	D722-EF	14.9@2700	14.0	6.3	29.0@2400	14.0	5.6	EM, IFI
D722-EF10	D722-EF	14.2@2600	13.8	6.0	29.8@2000	14.2	4.8	EM, IFI
D722-EF11	D722-EF	13.7@2500	14.2	6.0	31.6@2000	15.8	5.3	EM, IFI
D722-EF12	D722-EF	12.7@2400	13.7	5.5	28.4@2100	14.0	4.9	EM, IFI
D722-EF13	D722-EF	11.8@2200	13.4	4.9	26.8@1900	13.6	4.3	EM, IFI
D722-EF14	D722-EF	10.2@2050	12.5	4.3	29.1@1600	14.2	3.8	EM, IFI
D722-EF15	D722-EF	10.1@2000	12.5	4.2	29.1@1600	14.2	3.8	EM, IFI
Z482-EF01	Z482-EF	13.3@3600	15.4	6.2	22.5@2600	16.7	4.9	EM, IFI
Z482-EF02	Z482-EF	13.1@3600	15.2	6.1	21.6@2600	16.2	4.7	EM, IFI
Z482-EF03	Z482-EF	11.0@3200	14.1	5.0	20.9@2300	15.3	3.9	EM, IFI
Z482-EF04	Z482-EF	11.0@3000	14.6	4.9	20.7@2600	15.2	4.4	EM, IFI
Z482-EF05	Z482-EF	9.5@2600	14.3	4.2	19.8@2200	14.3	3.5	EM, IFI
Z482-EF06	Z482-EF	8.7@2400	14.0	3.8	19.0@1900	13.6	2.9	EM, IFI
Z482-EF07	Z482-EF	7.9@2200	13.8	3.4	18.9@1900	13.5	2.9	EM, IFI

0.719 L

0.479 L