

KUBOTA CORPORATION

EXECUTIVE ORDER U-R-025-1045

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.719KCB	0.479, 0.719	Diesel	3000					
SPECIAL	FEATURES & EMISSION C	CONTROL SYSTEMS	TYPICAL EQUIPMENT APPLICATION						
	Indirect Diesel Inje	ection	Loader, Tractor, Compressor, Genera Power Unit, Carrier, Garden Tractor Mower, Skid Steer Loader, Nonroad Vehicle, Welder, Roller, Light Tower, F Lift, Excavator	, Mini Backhoe, Sweeper, Utility					

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			ı	EXHAUST (g/kw-ł		OPACITY (%)				
POWER CLASS	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			4.9	2.6	0.26	11	13	15	

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-025-1045 Family: PKBXL.719KCB Attachment Last Revised: 9/22/2022

D722-EFF D722-EF01 F3						,	_	,				_								
D722-EF D722-EF01 1-3 D.719 Liters 14.7 kilowatt 3600 15.0 mm3/stroke 45.1 N-m 2600 16.3 mm3/stroke N/A N/A N/A N/A D722-EF D722-EF02 1-3 D.719 Liters 14.7 kilowatt 3600 15.0 mm3/stroke 45.1 N-m 2600 16.3 mm3/stroke N/A N/A N/A N/A D722-EF D722-EF03 1-3 D.719 Liters 13.8 kilowatt 3400 14.5 mm3/stroke 43.0 N-m 2600 15.3 mm3/stroke N/A N/A N/A N/A D722-EF D722-EF03 1-3 D.719 Liters 13.0 kilowatt 3200 13.7 mm3/stroke 44.8 N-m 2600 14.9 mm3/stroke N/A N/A N/A D722-EF D722-EF05 1-3 D.719 Liters 12.2 kilowatt 3200 13.7 mm3/stroke 44.2 N-m 2200 15.8 mm3/stroke N/A N/A N/A D722-EF D722-EF06 1-3 D.719 Liters 11.3 kilowatt 2950 13.3 mm3/stroke 45.2 N-m 2200 15.0 mm3/stroke N/A N/A N/A D722-EF D722-EF06 1-3 D.719 Liters 11.3 kilowatt 2950 13.3 mm3/stroke 44.7 N-m 2200 15.0 mm3/stroke N/A N/A N/A D72-EF D722-EF07 1-3 D.719 Liters 11.1 kilowatt 2900 13.3 mm3/stroke 44.2 N-m 2200 15.1 mm3/stroke N/A N/A N/A D72-EF D722-EF07 1-3 D.719 Liters 11.1 kilowatt 2900 13.3 mm3/stroke 44.2 N-m 2200 15.1 mm3/stroke N/A N/A N/A D72-EF D722-EF09 1-3 D.719 Liters 11.1 kilowatt 2800 13.9 mm3/stroke 44.2 N-m 2200 15.1 mm3/stroke N/A N/A N/A D72-EF D722-EF09 1-3 D.719 Liters 11.1 kilowatt 2700 14.0 mm3/stroke 44.2 N-m 2000 14.2 mm3/stroke N/A N/A N/A D72-EF D722-EF10 1-3 D.719 Liters 10.6 kilowatt 2600 13.8 mm3/stroke 44.9 N-m 2000 14.2 mm3/stroke N/A N/A N/A N/A D72-EF D722-EF10 1-3 D.719 Liters 10.6 kilowatt 2600 13.8 mm3/stroke 44.9 N-m 2000 14.2 mm3/stroke N/A N/A N/A D72-EF D722-EF13 1-3 D.719 Liters 5.5 kilowatt 2600 13.4 mm3/stroke 36.4 N-m 1						Displacement -		Peak Power -	Peak Power -	Peak Power -	Peak Power - Fue	l	Peak Torque -	Peak Torque -	Peak Torque -	Peak Torque -				
D722-EF D722-EF012 1-3 D.719 Liters 14.7 kilowatt 3600 15.0 mm3/stroke 45.1 N-m 2600 16.3 mm3/stroke N/A N/A N/A N/A D722-EF D722-EF02 1-3 D.719 Liters 13.8 kilowatt 3000 14.5 mm3/stroke 43.0 N-m 2600 15.3 mm3/stroke N/A N/A N/A N/A N/A D722-EF D722-EF03 1-3 D.719 Liters 12.2 kilowatt 3200 13.7 mm3/stroke 44.2 N-m 2000 15.8 mm3/stroke N/A N/A N/A N/A D722-EF D722-EF05 1-3 D.719 Liters 12.2 kilowatt 3200 13.7 mm3/stroke 44.2 N-m 2000 15.8 mm3/stroke N/A N/A N/A D722-EF D722-EF05 1-3 D.719 Liters 11.3 kilowatt 2950 13.3 mm3/stroke 42.7 N-m 2200 15.0 mm3/stroke N/A N/A N/A D72-EF D722-EF05 1-3 D.719 Liters 11.1 kilowatt 2950 13.3 mm3/stroke 42.7 N-m 2200 15.0 mm3/stroke N/A N/A N/A D72-EF D722-EF06 1-3 D.719 Liters 11.1 kilowatt 2950 13.3 mm3/stroke 42.7 N-m 2000 15.1 mm3/stroke N/A N/A N/A D72-EF D722-EF07 1-3 D.719 Liters 11.1 kilowatt 2950 13.3 mm3/stroke 42.9 N-m 2000 15.1 mm3/stroke N/A N/A N/A D72-EF D722-EF09 1-3 D.719 Liters 11.1 kilowatt 2950 13.3 mm3/stroke 42.9 N-m 2000 15.1 mm3/stroke N/A N/A N/A D72-EF D72-EF09 1-3 D.719 Liters 11.1 kilowatt 2950 13.0 mm3/stroke 42.9 N-m 2000 14.2 mm3/stroke N/A N/A N/A D72-EF D72-EF09 1-3 D.719 Liters 10.6 kilowatt 2950 13.8 mm3/stroke 42.9 N-m 2000 14.2 mm3/stroke N/A N/A N/A D72-EF D72-EF10 1-3 D.719 Liters 10.2 kilowatt 2950 13.8 mm3/stroke 42.9 N-m 2000 15.8 mm3/stroke N/A N/A N/A D72-EF D72-EF112 1-3 D.719 Liters 9.5 kilowatt 2500 13.8 mm3/stroke 42.9 N-m 2000 15.8 mm3/stroke N/A N/A N/A D72-EF D72-EF112 1-3 D.719 Liters 9.5 kilowatt 2500 13.4 mm3/stroke 39.5 N-m 1600	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
D722-EFF D722-EF03 1-3 D.719 Liters 13.8 kilowatt 3400 14.5 mm3/stroke 43.0 N-m 2600 15.3 mm3/stroke N/A N/A N/A N/A D722-EFF D722-EF03 1-3 D.719 Liters 13.0 kilowatt 3200 14.3 mm3/stroke 41.8 N-m 2600 14.9 mm3/stroke N/A N/A N/A D722-EFF D722-EF05 1-3 D.719 Liters 12.2 kilowatt 3200 13.7 mm3/stroke 44.2 N-m 2200 15.8 mm3/stroke N/A N/A N/A D722-EFF D722-EF05 1-3 D.719 Liters 11.1 kilowatt 2950 13.3 mm3/stroke 45.2 N-m 2200 15.1 mm3/stroke N/A N/A N/A D722-EFF D722-EF07 1-3 D.719 Liters 11.1 kilowatt 2950 13.3 mm3/stroke 41.2 N-m 2400 15.2 mm3/stroke N/A N/A N/A D722-EFF D722-EF08 1-3 D.719 Liters 11.1 kilowatt 2950 13.3 mm3/stroke 42.7 N-m 2200 15.1 mm3/stroke N/A N/A N/A D722-EFF D722-EF08 1-3 D.719 Liters 11.1 kilowatt 2950 13.3 mm3/stroke 42.9 N-m 2200 15.1 mm3/stroke N/A N/A N/A D722-EFF D722-EF09 1-3 D.719 Liters 11.1 kilowatt 2700 14.0 mm3/stroke 42.9 N-m 2200 15.1 mm3/stroke N/A N/A N/A D722-EFF D722-EF10 1-3 D.719 Liters 10.6 kilowatt 2600 13.8 mm3/stroke 40.4 N-m 2000 14.2 mm3/stroke N/A N/A N/A D722-EFF D722-EF11 1-3 D.719 Liters 10.2 kilowatt 2600 13.8 mm3/stroke 42.9 N-m 2000 14.2 mm3/stroke N/A N/A N/A D722-EFF D722-EF13 1-3 D.719 Liters 10.2 kilowatt 2400 13.7 mm3/stroke 42.9 N-m 2000 14.2 mm3/stroke N/A N/A N/A D72-EFF D722-EF13 1-3 D.719 Liters 10.2 kilowatt 2400 13.7 mm3/stroke 42.9 N-m 2000 14.2 mm3/stroke N/A N/A N/A D72-EFF D722-EF13 1-3 D.719 Liters 7.5 kilowatt 2400 13.7 mm3/stroke 39.5 N-m 2600 14.2 mm3/stroke N/A N/A N/A D72-EFF D722-EF13 1-3 D.719 Liters 7.5 kilowatt 2000 12.5 mm3/stroke 39.5 N-m 26	D722-EF	D722-EF01		I-3	0.719	Liters	14.7	kilowatt	3600	15.0	mm3/stroke	45.1	N-m	2600	16.3	mm3/stroke	N/A	N/A	N/A	N/A
D722-EFF D722-EF03 I-3 D.719	D722-EF	D722-EF01e		I-3	0.719	Liters	14.7	kilowatt	3600	15.0	mm3/stroke	45.1	N-m	2600	16.3	mm3/stroke	N/A	N/A	N/A	N/A
D722-EFF D722-EF05 1-3	D722-EF	D722-EF02		I-3	0.719	Liters	13.8	kilowatt	3400	14.5	mm3/stroke	43.0	N-m	2600	15.3	mm3/stroke	N/A	N/A	N/A	N/A
D722-EFF D722-EFF06 I-3 D.719	D722-EF	D722-EF03		I-3	0.719	Liters	13.0	kilowatt	3200	14.3	mm3/stroke	41.8	N-m	2600	14.9	mm3/stroke	N/A	N/A	N/A	N/A
D722-EFF D722-EF07 1-3	D722-EF	D722-EF04		I-3	0.719	Liters	12.2	kilowatt	3200	13.7	mm3/stroke	44.2	N-m	2200	15.8	mm3/stroke	N/A	N/A	N/A	N/A
D722-EF D722-EF07 I-3 D.719 Liters 11.1 kilowatt 2900 13.3 mm3/stroke 41.2 N-m 2400 15.2 mm3/stroke N/A N/A N/A D722-EF D722-EF08 I-3 D.719 Liters 11.3 kilowatt 2800 13.9 mm3/stroke 42.9 N-m 2200 15.1 mm3/stroke N/A N/A N/A N/A D722-EF D722-EF09 I-3 D.719 Liters 11.1 kilowatt 2700 14.0 mm3/stroke 39.3 N-m 2400 14.0 mm3/stroke N/A N/A N/A D722-EF D722-EF10 I-3 D.719 Liters 10.6 kilowatt 2500 13.8 mm3/stroke 40.4 N-m 2000 14.2 mm3/stroke N/A N/A N/A D722-EF D722-EF11 I-3 D.719 Liters 10.2 kilowatt 2500 14.2 mm3/stroke 42.9 N-m 2000 15.8 mm3/stroke N/A N/A N/A D722-EF D722-EF12 I-3 D.719 Liters 9.5 kilowatt 2400 13.7 mm3/stroke 38.5 N-m 2100 14.0 mm3/stroke N/A N/A N/A D722-EF D722-EF13 I-3 D.719 Liters 8.8 kilowatt 2200 13.4 mm3/stroke 36.4 N-m 1900 13.6 mm3/stroke N/A N/A N/A D722-EF D722-EF14 I-3 D.719 Liters 7.6 kilowatt 2000 12.5 mm3/stroke 39.5 N-m 1600 14.2 mm3/stroke N/A N/A N/A D722-EF D722-EF15 I-3 D.719 Liters 7.5 kilowatt 2000 12.5 mm3/stroke 39.5 N-m 1600 14.2 mm3/stroke N/A N/A N/A D722-EF D722-EF15 I-3 D.719 Liters 7.5 kilowatt 2000 12.5 mm3/stroke 39.5 N-m 1600 14.2 mm3/stroke N/A N/A N/A D722-EF D722-EF15 I-3 D.719 Liters 7.5 kilowatt 3600 15.4 mm3/stroke 39.5 N-m 1600 14.2 mm3/stroke N/A N/A N/A D722-EF D.72-EF15 I-3 D.719 Liters 7.5 kilowatt 3600 15.2 mm3/stroke 39.5 N-m 1600 14.2 mm3/stroke N/A N/A N/A D722-EF D.72-EF15 I-3 D.719 Liters 8.2 kilowatt 3600 15.2 mm3/stroke 29.3 N-m 2600 16.7 mm3/stroke N/A N/A N/A D722-EF D.72-EF15 I-2 D.479 Liters 8.2 kilowatt 3600 15.2 mm3/stroke 29.3 N-m 2600 15.2 mm3/st	D722-EF	D722-EF05		I-3	0.719	Liters	12.2	kilowatt	3000	14.1	mm3/stroke	45.2	N-m	2200	16.1	mm3/stroke	N/A	N/A	N/A	N/A
D722-EF D722-EF08 I-3 D.719	D722-EF	D722-EF06		I-3	0.719	Liters	11.3	kilowatt	2950	13.3	mm3/stroke	42.7	N-m	2200	15.0	mm3/stroke	N/A	N/A	N/A	N/A
D722-EF D722-EF10	D722-EF	D722-EF07		I-3	0.719	Liters	11.1	kilowatt	2900	13.3	mm3/stroke	41.2	N-m	2400	15.2	mm3/stroke	N/A	N/A	N/A	N/A
D722-EF D722-EF10	D722-EF	D722-EF08		I-3	0.719	Liters	11.3	kilowatt	2800	13.9	mm3/stroke	42.9	N-m	2200	15.1	mm3/stroke	N/A	N/A	N/A	N/A
D722-EF D722-EF11	D722-EF	D722-EF09		I-3	0.719	Liters	11.1	kilowatt	2700	14.0	mm3/stroke	39.3	N-m	2400	14.0	mm3/stroke	N/A	N/A	N/A	N/A
D722-EF D722-EF12	D722-EF	D722-EF10		I-3	0.719	Liters	10.6	kilowatt	2600	13.8	mm3/stroke	40.4	N-m	2000	14.2	mm3/stroke	N/A	N/A	N/A	N/A
D722-EF D722-EF13	D722-EF	D722-EF11		I-3	0.719	Liters	10.2	kilowatt	2500	14.2	mm3/stroke	42.9	N-m	2000	15.8	mm3/stroke	N/A	N/A	N/A	N/A
D722-EF D722-EF14	D722-EF	D722-EF12		I-3	0.719	Liters	9.5	kilowatt	2400	13.7	mm3/stroke	38.5	N-m	2100	14.0	mm3/stroke	N/A	N/A	N/A	N/A
D722-EF D722-EF15	D722-EF	D722-EF13		I-3	0.719	Liters	8.8	kilowatt	2200	13.4	mm3/stroke	36.4	N-m	1900	13.6	mm3/stroke	N/A	N/A	N/A	N/A
Z482-EF Z482-EF01 I-2 0.479 Liters 9.9 kilowatt 3600 15.4 mm3/stroke 30.5 N-m 2600 16.7 mm3/stroke N/A	D722-EF	D722-EF14		I-3	0.719	Liters	7.6	kilowatt	2050	12.5	mm3/stroke	39.5	N-m	1600	14.2	mm3/stroke	N/A	N/A	N/A	N/A
Z482-EF Z482-EFO2 I-2 0.479 Liters 9.8 kilowatt 3600 15.2 mm3/stroke 29.3 N-m 2600 16.2 mm3/stroke N/A	D722-EF	D722-EF15		I-3	0.719	Liters	7.5	kilowatt	2000	12.5	mm3/stroke	39.5	N-m	1600	14.2	mm3/stroke	N/A	N/A	N/A	N/A
Z482-EF Z482-EF03	Z482-EF	Z482-EF01		I-2	0.479	Liters	9.9	kilowatt	3600	15.4	mm3/stroke	30.5	N-m	2600	16.7	mm3/stroke	N/A	N/A	N/A	N/A
Z482-EF Z482-EF04 I-2 0.479 Liters 8.2 kilowatt 3000 14.6 mm3/stroke 28.0 N-m 2600 15.2 mm3/stroke N/A	Z482-EF	Z482-EF02		I-2	0.479	Liters	9.8	kilowatt	3600	15.2	mm3/stroke	29.3	N-m	2600	16.2	mm3/stroke	N/A	N/A	N/A	N/A
Z482-EF Z482-EFO5 I-2 0.479 Liters 7.1 kilowatt 2600 14.3 mm3/stroke 26.9 N-m 2200 14.3 mm3/stroke N/A N/A N/A Z482-EF Z482-EFO6 I-2 0.479 Liters 6.5 kilowatt 2400 14.0 mm3/stroke 25.7 N-m 1900 13.6 mm3/stroke N/A N/A Z482-EF Z482-EFO7 I-2 0.479 Liters 5.9 kilowatt 2200 13.8 mm3/stroke 25.6 N-m 1900 13.5 mm3/stroke N/A N/A Z482-EF Z482-EFO5e I-2 0.479 Liters 7.1 kilowatt 2600 14.3 mm3/stroke 26.9 N-m 2200 14.3 mm3/stroke N/A N/A N/A	Z482-EF	Z482-EF03		I-2	0.479	Liters	8.2	kilowatt	3200	14.1	mm3/stroke	28.3	N-m	2300	15.3	mm3/stroke	N/A	N/A	N/A	N/A
Z482-EF Z482-EFO6 I-2 0.479 Liters 6.5 kilowatt 2400 14.0 mm3/stroke 25.7 N-m 1900 13.6 mm3/stroke N/A N/A N/A Z482-EF Z482-EFO7 I-2 0.479 Liters 5.9 kilowatt 2200 13.8 mm3/stroke 25.6 N-m 1900 13.5 mm3/stroke N/A N/A Z482-EF Z482-EF05e I-2 0.479 Liters 7.1 kilowatt 2600 14.3 mm3/stroke 26.9 N-m 2200 14.3 mm3/stroke N/A N/A N/A	Z482-EF	Z482-EF04		I-2	0.479	Liters	8.2	kilowatt	3000	14.6	mm3/stroke	28.0	N-m	2600	15.2	mm3/stroke	N/A	N/A	N/A	N/A
Z482-EF Z482-EF07	Z482-EF	Z482-EF05		I-2	0.479	Liters	7.1	kilowatt	2600	14.3	mm3/stroke	26.9	N-m	2200	14.3	mm3/stroke	N/A	N/A	N/A	N/A
Z482-EF Z482-EF05e I-2 0.479 Liters 7.1 kilowatt 2600 14.3 mm3/stroke 26.9 N-m 2200 14.3 mm3/stroke N/A N/A N/A	Z482-EF	Z482-EF06		I-2	0.479	Liters	6.5	kilowatt	2400	14.0	mm3/stroke	25.7	N-m	1900	13.6	mm3/stroke	N/A	N/A	N/A	N/A
	Z482-EF	Z482-EF07		I-2	0.479	Liters	5.9	kilowatt	2200	13.8	mm3/stroke	25.6	N-m	1900	13.5	mm3/stroke	N/A	N/A	N/A	N/A
Z482-EF Z482-EF09 I-2 0.479 Liters 9.8 kilowatt 3600 15.2 mm3/stroke 29.3 N-m 2600 16.2 mm3/stroke N/A	Z482-EF	Z482-EF05e		I-2	0.479	Liters	7.1	kilowatt	2600	14.3	mm3/stroke	26.9	N-m	2200	14.3	mm3/stroke	N/A	N/A	N/A	N/A
	Z482-EF	Z482-EF09		I-2	0.479	Liters	9.8	kilowatt	3600	15.2	mm3/stroke	29.3	N-m	2600	16.2	mm3/stroke	N/A	N/A	N/A	N/A