## KUBOTA Corporation

EXECUTIVE ORDER U-R-025-0514 New Off-Road Compression-Ignition Engines

Pursuant to the authority vested in the 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-02-003;

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)		
2012	CKBXL03.8AMD	3.770	Diesel	8000		
	FEATURES & EMISSION		TYPICAL EQUIPMENT APPLICATION			
Ele Char Exhaust	ectronic Direct Injection, ge Air Cooler, Electronic Gas Recirculation, Diese and Periodic Trap O	Control Module, I Oxidation Catalyst,	Tractor, Other Industrial Equipment			

The engine models and codes are attached.

The following are the exhaust certification standards (STD) and certification levels (CERT) for hydrocarbon (HC), 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		EXHAUST (g/kw-hr)					OPACITY (%)		
POWER CLASS	STANDARD CATEGORY		нс	NOx	NMHC+NOx	СО	P <b>M</b>	ACCEL	LUG	PEAK
75 <u>&lt;</u> kW < 130	Tier 4 / ALT NOx	STD	0.19	3.4	N/A	5.0	0.02	N/A	N/A	N/A
		CERT	0.002	2.6		0.03	0.001			

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 \_\_\_\_\_\_ day of July 2011.

Annette Hebert, Chief

Mobile Source Operations Division

## **Engine Model Summary Form**

Manufacturer:

**KUBOTA Corporation** 

Engine category:

Nonroad Cl

EPA Engine Family: CKBXL03.8AMD

Mfr Family Name: N/A

Process Code:

**Running Change** 

Attachment
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EO# U-R-0>5-0514 3/14/2012

V3800-CR-TI-EF01         V3800-CR-TI-EF         116.3@2600         75.0         43.6         276.9@1500         84.5         28.3         EM,ECM,EGR, OX, PTO, C         PTO, C         C         V3800-CR-TI-EF02         V3800-CR-TI-EF         112.0@2600         71.1         41.3         226.1@1500         81.6         27.4         EM,ECM,EGR, OX,	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 J193	0
/3800-CR-TI-EF03 V3800-CR-TI-EF 108.4@2400 73.3 39.3 272.6@1500 81.6 27.4 EM,ECM,EGR, OX, V3800-CR-TI-EF04 V3800-CR-TI-EF 103.8@2200 75.9 37.3 272.6@1500 81.6 27.4 EM,ECM,EGR, OX, V3800-CR-TI-EF05 V3800-CR-TI-EF 114.0@2600 72.8 42.3 272.6@1500 81.9 27.5 EM,ECM,EGR, OX, V3800-CR-TI-EF06 V3800-CR-TI-EF 102.2@2600 65.5 38.1 251.5@1500 75.3 25.2 EM,ECM,EGR, OX, V3800-CR-TI-EF07 V3800-CR-TI-EF 104.5@2600 66.9 38.9 255.3@1500 76.4 25.6 EM,ECM,EGR, OX, V3800-CR-TI-EF08 V3800-CR-TI-EF 102.9@2400 70.0 37.6 255.3@1500 76.4 25.6 EM,ECM,EGR, OX, V3800-CR-TI-EF09 V3800-CR-TI-EF 102.9@2400 70.0 37.6 255.3@1500 76.4 25.6 EM,ECM,EGR, OX, V3800-CR-TI-EF09 V3800-CR-TI-EF 108.4@2400 73.3 39.3 272.6@1500 81.4 27.3 EM,ECM,EGR, OX, C3.8-CR-TI-EF03 C3.8-CR-TI-EF 108.4@2400 73.3 39.3 272.6@1500 81.6 27.4 EM,ECM,EGR, OX, D3.8H-CR-TI-EF04 D3.8H-CR-TI-EF 103.8@2200 75.9 37.3 272.6@1500 81.6 27.4 EM,ECM,EGR, OX, D3.8H-CR-TI-EF04 D3.8H-CR-TI-EF 103.8@2200 75.9 37.3 272.6@1500 81.6 27.4 EM,ECM,EGR, OX, D3.8H-CR-TI-EF04 D3.8H-CR-TI-EF 103.8@2200 75.9 37.3 272.6@1500 81.6 27.4 EM,ECM,EGR, OX, D3.8H-CR-TI-EF04 D3.8H-CR-TI-EF 103.8@2200 75.9 37.3 272.6@1500 81.6 27.4 EM,ECM,EGR, OX, D3.8H-CR-TI-EF04 D3.8H-CR-TI-EF 103.8@2200 75.9 37.3 272.6@1500 81.6 27.4 EM,ECM,EGR, OX, D3.8H-CR-TI-EF04 D3.8H-	/3800-CR-TI-EF01	V3800-CR-TI-EF	116.3@2600	75.0	43.6	276.9@1500	84.5	28.3	EM,ECM,EGR, OX,	PROX, DDI, TO
V3800-CR-TI-EF04 V3800-CR-TI-EF 103.8@2200 75.9 37.3 272.6@1500 81.6 27.4 EM,ECM,EGR, OX, V3800-CR-TI-EF05 V3800-CR-TI-EF 114.0@2600 72.8 42.3 272.6@1500 81.9 27.5 EM,ECM,EGR, OX, V3800-CR-TI-EF06 V3800-CR-TI-EF 102.2@2600 65.5 38.1 251.5@1500 75.3 25.2 EM,ECM,EGR, OX, V3800-CR-TI-EF07 V3800-CR-TI-EF 104.5@2600 66.9 38.9 255.3@1500 76.4 25.6 EM,ECM,EGR, OX, V3800-CR-TI-EF08 V3800-CR-TI-EF 102.9@2400 70.0 37.6 255.3@1500 76.4 25.6 EM,ECM,EGR, OX, V3800-CR-TI-EF09 V3800-CR-TI-EF 92.8@2200 68.1 33.5 272.6@1500 81.4 27.3 EM,ECM,EGR, OX, V3800-CR-TI-EF09 V3800-CR-TI-EF 108.4@2400 73.3 39.3 272.6@1500 81.6 27.4 EM,ECM,EGR, OX, C3.8-CR-TI-EF03 C3.8-CR-TI-EF 103.8@2200 75.9 37.3 272.6@1500 81.6 27.4 EM,ECM,EGR, OX, D3.8H-CR-TI-EF04 D3.8H-CR-TI-EF 103.8@2200 75.9 37.3 272.6@1500 81.6 27.4 EM,ECM,EGR, OX, D3.8H-CR-TI-EF04 D3.8H-CR-TI-EF 103.8@2200 75.9 37.3 272.6@1500 81.6 27.4 EM,ECM,EGR, OX, D3.8H-CR-TI-EF04 D3.8H-CR-TI-EF 103.8@2200 75.9 37.3 272.6@1500 81.6 27.4 EM,ECM,EGR, OX, D3.8H-CR-TI-EF04 D3.8H-CR-TI-EF 103.8@2200 75.9 37.3 272.6@1500 81.6 27.4 EM,ECM,EGR, OX, D3.8H-CR-TI-EF04 D3.8H-CR-TI-EF 103.8@2200 75.9 37.3 272.6@1500 81.6 27.4 EM,ECM,EGR, OX, D3.8H-CR-TI-EF04 D3.8H-CR-TI-EF 103.8@2200 75.9 37.3 272.6@1500 81.6 27.4 EM,ECM,EGR, OX, D3.8H-CR-TI-EF04 D3.8H-C	√3800-CR-TI-EF02	V3800-CR-TI-EF	112.0@2600	71.1	41.3	226.1@1500	81.6	27.4	EM,ECM,EGR, OX,	
V3800-CR-TI-EF05 V3800-CR-TI-EF 114.0@2600 72.8 42.3 272.6@1500 81.9 27.5 EM,ECM,EGR, OX, V3800-CR-TI-EF06 V3800-CR-TI-EF 102.2@2600 65.5 38.1 251.5@1500 75.3 25.2 EM,ECM,EGR, OX, V3800-CR-TI-EF07 V3800-CR-TI-EF 104.5@2600 66.9 38.9 255.3@1500 76.4 25.6 EM,ECM,EGR, OX, V3800-CR-TI-EF08 V3800-CR-TI-EF 102.9@2400 70.0 37.6 255.3@1500 76.4 25.6 EM,ECM,EGR, OX, V3800-CR-TI-EF09 V3800-CR-TI-EF 92.8@2200 68.1 33.5 272.6@1500 81.4 27.3 EM,ECM,EGR, OX, V3800-CR-TI-EF09 V3800-CR-TI-EF 108.4@2400 73.3 39.3 272.6@1500 81.6 27.4 EM,ECM,EGR, OX, D3.8H-CR-TI-EF04 D3.8H-CR-TI-EF 103.8@2200 75.9 37.3 272.6@1500 81.6 27.4 EM,ECM,EGR, OX, D3.8H-CR-TI-EF04 D3.8H-CR-TI-EF 103.8@2200 75.9 37.3 272.6@1500 81.6 27.4 EM,ECM,EGR, OX, D3.8H-CR-TI-EF04 D3.8H-CR-TI-EF 103.8@2200 75.9 37.3 272.6@1500 81.6 27.4 EM,ECM,EGR, OX, D3.8H-CR-TI-EF04 D3.8H-CR-TI-EF 103.8@2200 75.9 37.3 272.6@1500 81.6 27.4 EM,ECM,EGR, OX, D3.8H-CR-TI-EF04 D3.8H-CR-TI-EF 103.8@2200 75.9 37.3 272.6@1500 81.6 27.4 EM,ECM,EGR, OX, D3.8H-CR-TI-EF04 D3.8H-CR-TI-EF 103.8@2200 75.9 37.3 272.6@1500 81.6 27.4 EM,ECM,EGR, OX, D3.8H-CR-TI-EF04 D3.8H-CR-TI-EF 103.8@2200 75.9 37.3 272.6@1500 81.6 27.4 EM,ECM,EGR, OX, D3.8H-CR-TI-EF04 D3.8H-CR-TI-EF 103.8@2200 75.9 37.3 272.6@1500 81.6 27.4 EM,ECM,EGR, OX, D3.8H-CR-TI-EF04 D3.8H	√3800-CR-TI-EF03	V3800-CR-TI-EF	108.4@2400	73.3	39.3	272.6@1500	81.6	27.4	EM,ECM,EGR, OX,	and the second
V3800-CR-TI-EF06 V3800-CR-TI-EF 102.2@2600 65.5 38.1 251.5@1500 75.3 25.2 EM,ECM,EGR, OX, V3800-CR-TI-EF07 V3800-CR-TI-EF 104.5@2600 66.9 38.9 255.3@1500 76.4 25.6 EM,ECM,EGR, OX, V3800-CR-TI-EF08 V3800-CR-TI-EF 102.9@2400 70.0 37.6 255.3@1500 76.4 25.6 EM,ECM,EGR, OX, V3800-CR-TI-EF09 V3800-CR-TI-EF 92.8@2200 68.1 33.5 272.6@1500 81.4 27.3 EM,ECM,EGR, OX, C3.8-CR-TI-EF03 C3.8-CR-TI-EF 108.4@2400 73.3 39.3 272.6@1500 81.6 27.4 EM,ECM,EGR, OX, D3.8H-CR-TI-EF04 D3.8H-CR-TI-EF 103.8@2200 75.9 37.3 272.6@1500 81.6 27.4 EM,ECM,EGR, OX, D3.8H-CR-TI-EF04 D3.8H-CR-TI-EF 103.8@2200 75.9 37.3 272.6@1500 81.6 27.4 EM,ECM,EGR, OX, D3.8H-CR-TI-EF04 D3.8H-CR-TI-EF 103.8@2200 75.9 37.3 272.6@1500 81.6 27.4 EM,ECM,EGR, OX, D3.8H-CR-TI-EF04 D3.8H-CR-TI-EF 103.8@2200 75.9 37.3 272.6@1500 81.6 27.4 EM,ECM,EGR, OX, D3.8H-CR-TI-EF04 D3.8H-CR-TI-EF 103.8@2200 75.9 37.3 272.6@1500 81.6 27.4 EM,ECM,EGR, OX, D3.8H-CR-TI-EF04 D3.8H-CR-T	/3800-CR-TI-EF04	V3800-CR-TI-EF	103.8@2200	75.9	37.3	272.6@1500	81.6	27.4	EM,ECM,EGR, OX,	
V3800-CR-TI-EF07 V3800-CR-TI-EF 104.5@2600 66.9 38.9 255.3@1500 76.4 25.6 EM,ECM,EGR, OX, V3800-CR-TI-EF08 V3800-CR-TI-EF 102.9@2400 70.0 37.6 255.3@1500 76.4 25.6 EM,ECM,EGR, OX, V3800-CR-TI-EF09 V3800-CR-TI-EF 92.8@2200 68.1 33.5 272.6@1500 81.4 27.3 EM,ECM,EGR, OX, C3.8-CR-TI-EF03 C3.8-CR-TI-EF 108.4@2400 73.3 39.3 272.6@1500 81.6 27.4 EM,ECM,EGR, OX, D3.8H-CR-TI-EF04 D3.8H-CR-TI-EF 103.8@2200 75.9 37.3 272.6@1500 81.6 27.4 EM,ECM,EGR, OX, D3.8H-CR-TI-EF04 D3.8H-CR-TI-EF 103.8@2200 75.9 37.3 272.6@1500 81.6 27.4 EM,ECM,EGR, OX, D3.8H-CR-TI-EF04 D3.8H-CR-TI-EF 103.8@2200 75.9 37.3 272.6@1500 81.6 27.4 EM,ECM,EGR, OX, D3.8H-CR-TI-EF04 D3.8H-CR-TI-EF 103.8@2200 75.9 37.3 272.6@1500 81.6 27.4 EM,ECM,EGR, OX, D3.8H-CR-TI-EF04 D3.8H-CR-TI-EF 103.8@2200 75.9 37.3 272.6@1500 81.6 27.4 EM,ECM,EGR, OX, D3.8H-CR-TI-EF04 D3.8H-CR-TI-EF0	/3800-CR-TI-EF05	V3800-CR-TI-EF	114.0@2600	72.8	42.3	272.6@1500	81.9	27.5	EM,ECM,EGR, OX,	
/3800-CR-TI-EF08 V3800-CR-TI-EF 102.9@2400 70.0 37.6 255.3@1500 76.4 25.6 EM,ECM,EGR, OX, /3800-CR-TI-EF09 V3800-CR-TI-EF 92.8@2200 68.1 33.5 272.6@1500 81.4 27.3 EM,ECM,EGR, OX, C3.8-CR-TI-EF03 C3.8-CR-TI-EF 108.4@2400 73.3 39.3 272.6@1500 81.6 27.4 EM,ECM,EGR, OX, D3.8H-CR-TI-EF04 D3.8H-CR-TI-EF 103.8@2200 75.9 37.3 272.6@1500 81.6 27.4 EM,ECM,EGR, OX, D3.8H-CR-TI-EF04 D3.8H-CR-TI-EF 103.8@2200 75.9 37.3 272.6@1500 81.6 27.4 EM,ECM,EGR, OX, D3.8H-CR-TI-EF04 D	/3800-CR-TI-EF06	V3800-CR-TI-EF	102.2@2600	65.5	38.1	251.5@1500	75.3	25.2	EM,ECM,EGR, OX,	
V3800-CR-TI-EF09 V3800-CR-TI-EF 92.8@2200 68.1 33.5 272.6@1500 81.4 27.3 EM,ECM,EGR, OX, C3.8-CR-TI-EF03 C3.8-CR-TI-EF 108.4@2400 73.3 39.3 272.6@1500 81.6 27.4 EM,ECM,EGR, OX, D3.8H-CR-TI-EF04 D3.8H-CR-TI-EF 103.8@2200 75.9 37.3 272.6@1500 81.6 27.4 EM,ECM,EGR, OX, D3.8H-CR-TI-EF04 D3.8H-CR-TI-EF 103.8@2200 75.9 37.3 272.6@1500 81.6 27.4 EM,ECM,EGR, OX, D3.8H-CR-TI-EF04 D3.8H-	V3800-CR-TI-EF07	V3800-CR-TI-EF	104.5@2600	66.9	38.9	255.3@1500	76.4	25.6	EM,ECM,EGR, OX,	
C3.8-CR-TI-EF03 C3.8-CR-TI-EF 108.4@2400 73.3 39.3 272.6@1500 81.6 27.4 EM,ECM,EGR, OX, D3.8H-CR-TI-EF04 D3.8H-CR-TI-EF 103.8@2200 75.9 37.3 272.6@1500 81.6 27.4 EM,ECM,EGR, OX,	/3800-CR-TI-EF08	V3800-CR-TI-EF	102.9@2400	70.0	37.6	255.3@1500	76.4	25.6	EM,ECM,EGR, OX,	
03.8H-CR-TI-EF04 D3.8H-CR-TI-EF 103.8@2200 75.9 37.3 272.6@1500 81.6 27.4 EM,ECM,EGR, OX,	/3800-CR-TI-EF09	V3800-CR-TI-EF	92.8@2200	68.1	33.5	272.6@1500	81.4	27.3	EM,ECM,EGR, OX,	
	C3.8-CR-TI-EF03	C3.8-CR-TI-EF	108.4@2400	73.3	39.3	272.6@1500	81.6	27.4	EM,ECM,EGR, OX,	
OTO O O LEGO OV	03.8H-CR-TI-EF04	D3.8H-CR-TI-EF	103.8@2200	75.9	37.3	272.6@1500	81.6	27.4	EM,ECM,EGR, OX,	
33.8H-CR-II-EF09 D3.8H-CR-III-EF 92.8@2200 68.1 33.5 272.6@1500 81.4 27.3 EM,EGM,EGM, CA,	D3.8H-CR-TI-EF09	D3.8H-CR-TI-EF	92.8@2200	68.1	33.5	272.6@1500	81.4	27.3	EM,ECM,EGR, OX,	1
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