

## **KUBOTA CORPORATION**

EXECUTIVE ORDER U-R-025-0233 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)						
2006	6KBXL01.5BCD	1.123, 1.498	Diesel	5000						
	FEATURES & EMISSION (		TYPICAL EQUIPMENT APPLICATION							
	Indirect Diesel Inje	ction	Compressor, Other Industrial E	quipment						

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 POWER CLASS	EMISSION			E		OPACITY (%)				
	STANDARD CATEGORY		HC	NOx	NMHC+NOx	co	PM	ACCEL	LUG	PEAK
19 ≤ kW < 37	Tier 2	STD	N/A	N/A	7.5	5.5	0.60	20	15	50
		CERT			4.9	1.3	0.31	5	3	10

**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 December 2005.

Ropharl Susnowitz
for Allen Lyons, Chief

Mobile Source Operations Division

## **Engine Model Summary Form**

Manufacturer: KUBOTA Corporation

Engine category: Nonroad CI

EPA Engine Family: 6KBXL01.5BCD

Mfr Family Name: N/A

Process Code: Running Change

Attachment Cothu-R-02533

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9.Emission Control Device Per SAE J1930											***											
y en De						- Inger	7							-								
Rate: ak torq	4	က	0	ю.	Ŋ	4	N	7	m	4	က	D.	ന	7	വ	4	ល	က	7	7	o	
8.Fuel Rate: (lbs/hr)@peak torque	T.	9.3	0	12.3	7	9.4	9.2	8.7	6	8.4	8.3	8.5	ထ	8.7	9.5	8.4	10.5	9.3	12.2	8.7	10.0	
(lbs/h				-																		
peak		· .	The second secon									:										
mm/stroke@peak torque	25.9	25.1	<b>2</b> 43	25.1	23.8	24.8	25.7	24.4	Z.	23.5	24.7	25.2	24.8	24.2	25.1	23.6	24.8	24.4	24.9	24.2	23.6	
s/mm			Separation of the separation o					2				··										
₽	0	0		0	0	0	0	0		0	0	0		0		0	o	0	0	0	0	
forque @ RP (SEA Gross)	54.5@1700	52.7@2200	51.6@2200	72.2@2200	69.4@2100	72.5@1700	72.5@1600	70.7@1600	64.0@1900	65.3@1600	69.0@1500	70.9@1500	69.8@1500	68.2@1600	72.2@1700	66.5@1600	67.9@1900	68.9@1700	69.3@2200	68.2@1600	66.4@1900	
6.Torque @ RPM (SEA Gross)	54.5	52.7(	51.6(	72.2(	69.4(	72.5(	72.5(	70.7	64.0(	65.3(	69.00	70.9	69.8(	68.2(	72.2(	66.5(	67.9	68.9	69.3(	68.2(	66.4(	
			041	Commence of the commence of th										-		: .			726	W		
ak HP only)												 	120							enkart I. strottikk dikenterin		
(lbs/hr) @ peak HP (for diesels only)	11.8	11.7	9.0	15.6	<u>4</u> 6	14.3	4	11.7	Ė	11.0	10.9	10.6	5 0 4	11.9	12.8	11.9	13.0	12.8	15.3	11.6	12.5	2
(lbs/hr (for d				Inches De Latel Manufacture													T.					in the second
K HP						-														and Administration of the second		
troke @ peal or diesel only	23.5	23.2	22.6	23.2	22.5	22.8	22.2	21.8	21.8	22.4	23.3	23.6	23.2	20.5	22.0	20.5	21.6	22.0	22.8	21.6	22.3	
mm/stroke @ peak HP (for diesel only)	CX.	7	7	7	N	2	Ò	7	N	7	N	2	7	7	7	2	N	2	7	2	2	4.5
/ww )	PART I	And the second of the second of		Market Mark									1									V
RPM (ss)	000	000	900	000	950	800	300	400	400	200	100	000	000	900	900	900	8	900	000	400	200	
3.BHP@RPM (SAE Gross)	26.4@3000	26.0@3000	24.3@2800	35.5@3000	33.5@2850	33.5@2800	27.6@2300	28.4@2400	28.4@2400	26.0@2200	26.0@2100	24.8@2000	24.4@2000	28.2@2600	31.0@2600	28.2@2600	29.6@2700	31.0@2600	33.5@3000	28.2@2400	29.2@2500	
3.B (S.	26	26	24	35.	33	33	72	28	28	26	26	24.	24	28	31	28	29	31.	33	28	29	
qel								, and a second						-								
2.Engine Model	D1105-ES	D1105-ES	D1105-ES	V1505-ES	V1505-ES	V1505-ES	V1505-ES	V1505-ES	V1505-ES	V1505-ES	V1505-ES	V1505-ES	V1505-ES	V1505-ES	V1505-ES	V1505-ES	V1505-ES	V1505-ES	V1505-ES	V1505-ES	V1505-ES	
Engin	Ę	1	170	V15	V15	V15	V 15	V15	V15	V15	V15	V15	V15	V15	V15	V15	V15	V15	V15	V15	V15	
		and the state of t										And the second s					ļ:,:	-				
Code	301	302	303	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	
1.Engine Code	D1105-ES01	D1105-ES02	D1105-ES03	V1505-ES01	V1505-ES02	V1505-ES03	V1505-ES04	V1505-ES05	V1505-ES06	V1505-ES07	V1505-ES08	V1505-ES09	V1505-ES10	V1505-ES11	V1505-ES12	V1505-ES13	V1505-ES14	V1505-ES15	V1505-ES16	V1505-ES17	V1505-ES18	
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