

## **KUBOTA Corporation**

EXECUTIVE ORDER U-R-025-0511 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	CKBXL01.9FCB	1.857	Diesel							
	FEATURES & EMISSION C		TYPICAL EQUIPMENT APPLICATION							
Indirect	Diesel Injection, Electron	ic Control Module	Refrigeration Unit							

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			E	XHAUST (g/kw-l	nr)	OPACITY (%)				
POWER CLASS			НС	NOx	NMHC+NOx	co	PM	ACCEL	LUG	PEAK	
8 ≤ kW < 19	Tier 4 - Final	STD	N/A	N/A	7.5	6.6	0.40	20	15	50	
		CERT			5.5	1.5	0.19	1	2	2	

**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 January 2011.

Annette Hebert, Chief

Mobile Source Operations Division

## **Engine Model Summary Form**

		$\rightarrow$	)-					11.			<u> </u>		-:							<b>*</b>
	_ gg   T-									1				•					1	
_	8.Fuel Rate: 9.Emission Control (lbs/hr)@peak torque Device Per SAE J1930	EM, Electronic				٠												٠.		
<del>_</del>	sion Coer SAE	듗		4:																
E0# U-R-025-05 1	Per E	膃		15 25 %			2.00		1			ŀ					i			
	E S	Ĭ.		4 %								İ					-			
÷.	g e	_														21			· .	
y	dne																ŀ			
· ·	ate:		200									-								
$\sim$ $\frac{1}{6}$	Fuel Rat )@peak 10.1	10.1																.		
7	J. (2)	,														:				
$\circ$	lbs/f																			
70# 0-R-1	1 ."																			
0	mm/stroke@peak torque 26.5									7.7		٠.	٠.		.	.			-	
	roke@p orque 26.5	26.5		1			-													
<u>q</u>		7				ĺ			٠.						•					
<u>.</u>	: /w.																			
	=																			
	5 -											ŀ	·.·.					•		
	6.Torque @ RPM (SEA Gross) 76.6@1700	76.6@1700			-						. :									
	<sub>ම</sub> දු <u>ම</u>	9											*:		-					
	SEA 6.6	9.9																		
	6.Tc	7		3 12	-															
70				# (# 1)	:											. ]			-	
Ì	_ <del>L</del> ≥ <del>L</del>	}															ŀ			
77 - 8	s on	_										ŀ	٠.			`				
3	© peak esels or 10.1	10.1					1					į.				. 1				
3/3-1	s/hr)		7.5		•						. 1	ŀ								
Attachment page 1	(lbs/hr) @ peak HP (for diesels only)												٠.							
\$												ļ								
**************************************	- 3 k				.	:														
a to	(e @ pr liesel or 26.5	26.5															1			
	se dies	7					1													
<b>-</b>	્રુ <b>લ્ટ</b>   ં						٠.									:	ľ			
	<b>E</b>   *,					,								\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \		:				١
	_   _													İ					:	
	RPIN OSS)	ŏ					'									.		1		
	3.BHP@RPM (SAE Gross) 24.8@1700	24.8@1700															ŀ			
_	SAI (SAI 8.4.8	8		٠.																
ti O																				
on B	75															1				
orp  -  ssi	g 🖺	ᇤ																	ľ	
A C G C G	Engine Mod	V1903-M-ET											-							
OT. YL( Sul	gip 903	906																		
KUBOTA Corporation Nonroad CI CKBXL01.9FCB N/A New Submission	2.Engine Model	>			.							.	-							
	7																			-
.: سارة: :: ne:	g g							:												
cturer: category: gine Famil nily Name s Code:	3 E	10E				-	-						.							
acturer: category: igine Family mily Name: is Code:	Jine Code	3-M-ET01e			-							İ								