

KUBOTA Corporation

EXECUTIVE ORDER U-R-025-0439-1 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)							
2010	AKBXL02.2FCD	1.647, 2.197	Diesel 5000								
SPECIAL	FEATURES & EMISSION	CONTROL SYSTEMS	TYPICAL EQUIPMENT APPLICATION								
Indirect	Diesel Injection, Electron	nic Control Module	Tractor, Compressor, Generator Set, 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			E	XHAUST (g/kW-l	OPACITY (%)				
POWER CLASS	STANDARD CATEGORY		HC	NOx	NMHC+NOx	co	PM	ACCEL	LUG	PEAK
19 <u><</u> kW < 37	Interim Tier 4	STD	N/A	N/A	7.5 5.5		0.30	20	15	50
·		CERT	,		6.0	1.0	0.17	2	2	4

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.

This Executive Order hereby cancels and replaces Executive Order U-R-025-0439 dated December 22, 2009.

Executed at El Monte, California on this

Annette Hebert, Chief

Mobile Source Operations Division

Engine Model Summary Form

Manufacturer: KUBOTA Corporation

Engine category: Nonroad CI
EPA Engine Family: AKBXL02.2FCD

Mfr Family Name: N/A

Process Code: Running Change

Attachment

Dage 1 of 1

U-R-025-0439-1

8/4/2010

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ntrol J1930	- 5-1				Jic											·	. ,								
8.Fuel Rate: 9.Emission Control (Ibs/hr)@peak torque Device Per SAE J1930	E	M	EM	EM	EM, Electronic	EM	EM	EM	EM	EM	EΜ	EM	EM	EM	EM	EM	EM	ЕМ	EM	EM	EM	EM	EM	EM	
9.Emis tevice P					EM,E																				
onbro									.* •		21 21 32														·
uel Rate gpeak to	9.5	9.4	9.5	9.5	9.5	9.5	9.4	9.4	9.4	9.4	8.9	12.2	12.8	12.8	12.8	12.8	12.8	12.8	12.8	12.8	12.8	12.8	12.0	9.0	
8.F. (lbs/hr)@			-																						
				·																					
7.Fuel Rate: mm/stroke@peak torque	35.4	35.1	35.4	35.4	35.4	35.4	35.1	35.1	35.1	35.1	35.4	36.5	35.8	35.7	35.7	35.8	35.8	35.7	35.8	35.7	35.7	35.7	35.8	35.8	
7.F mm/s											:				·				· .						
RPM ss)	300	300	300	200	300	300	300	300	300	300	200	200	009	009	009	900	009	009	009	009	900	009	200	200	
6.Torque @ RPM (SEA Gross)	76.9@1600	75.6@1600	76.9@1600	76.9@1600	76.9@1600	76.9@1600	75.6@1600	75.6@1600	75.6@1600	75.6@1600	76.9@1500	108.0@1500	105.6@1600	103.8@1600	103.8@1600	105.6@1600	105.6@1600	103.8@1600	105.6@1600	103.8@1600	103.8@1600	103.8@1600	105.6@1500	105.6@1500	٠.
6.To	76	32	76	2	2	76	7.6	7.	7.	7.	2	10	2	5	5	10	10	10	10	10	10	10	10	10	
ite: ak HP only)	-	-											¥												v.
5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only)	15.0	11.4	14.4	13.8	13.8	13.2	12.6	12.0	11.7	11.1	14.2	20.2	20.2	15.1	15.9	18.5	17.7	16.7	19.4	15.5	14.9	17.1	18.2	14.1	
4.Fuel Rate: mm/stroke @ peak HP (for diesel only)	_	_			_			:								_						_			
4.Fuel Rate: //stroke @ peak (for diesel only)	32.0	30.9	31.8	31.6	31.6	31.4	31.3	31.1	31.0	30.8	31.4	32.3	32.3	30.8	31.0	31.9	31.7	31.2	32.1	30.9	30.2	31.2	31.3	31.1	
4 mm/st (fo																									
RPM oss)	800	200	2,00	009	900	200	400	300	250	150	2,700	3800	9008	200	300	900	2200	400	2700	250	200	450	909	2700	
3.BHP@RPM (SAE Gross)	35.0@2800	27.5@2200	33.8@2700	32.6@2600	32.6@2600	31.2@2500	30.0@2400	28.8@2300	28.2@2250	26.8@2150	33.4@2700	48.1@2800	48.1@2800	37.8@2200	39.6@2300	44.7@2600	42.9@2500	41.3@2400	46.4@2700	38.6@2250	37.1@2200	42.1@2450	43.9@2600	44.9@2700	
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2.Engine Model	M-ET	M-ET	M-ET	M-ET	M-ET	M-ET	M-ET	M-ET	M-ET	M-ET	M-ET	M-ET	M-ET	M-ET	M-ET	M-ET	M-ET	M-ET	M-ET	M-ET	MET	M-ET	A-ET	M-ET	
Engine	D1703-M-ET	D1703-M-ET	D1703-M-ET	D1703-M-ET	D1703-M-ET	D1703-M-ET	D1703-M-ET	D1703-M-ET	D1703-M-ET	D1703-M-ET	D1703-M-ET	V2203-M-ET													
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e Code	W-ET01	W-ET02	M-ET03	M-ET04	1-ET04e	M-ET05	M-ET06	M-ET07	M-ET08	M-ET09	M-ET10	W-ET01	W-ET02	M-ET03	M-ET04	M-ET05	M-ET06	M-ET07	M-ET08	M-ET09	M-ET10	M-ET11	W-ET12	V-ET13	
1.Engine Code	D1703-M-ET01	D1703-M-ET02	D1703-M-ET03	D1703-M-ET04	D1703-M-ET04e	D1703-M-ET05	D1703-M-ET06	D1703-M-ET07	D1703-M-ET08	D1703-M-ET09	D1703-M-ET10	V2203-M-ET01	V2203-M-ET02	V2203-M-ET03	V2203-M-ET04	V2203-M-ET05	V2203-M-ET06	V2203-M-ET07	V2203-M-ET08	V2203-M-ET09	V2203-M-ET10	V2203-M-ET11	V2203-M-ET12	V2203-M-ET13	
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