EXECUTIVE ORDER U-R-046-0005 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 engine and emission control system 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)						
2004	4KMCL2.28A41	2.286	Diesel	8000						
SPECIAL	FEATURES & EMISSION	CONTROL SYSTEMS	TYPICAL EQUIPMENT A	APPLICATION						
In	direct Diesel Injection, T	urbocharger	Crane, Loader, Tractor, Dozer, Pump, Compressor and Ot 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 POWER CLASS	EMISSION STANDARD				EXHAUST (g/kw-l		OPACITY (%)				
	CATEGORY		HC	NOx	NMHC+NOx	co	PM	ACCEL	LUG	PEAK	
37 <u>&lt;</u> kW < 75	Tier 2	STD	N/A	N/A	7.5	5.0	0.40	20	15	50	
		CERT			5.9	1.5	0.17	8	6	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).

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.

Allen Lyons, Chief

Mobile Source Operations Division

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5000-9HO-7-17

KUKJE Machinery Co., EPA Mnfr:1700 Manufacturer:

Nonroad Cl Engine category:

4KMCL2.28A41 EPA Engine Family.

Mfr Family Name: A2300T1

**New Submission** Process Code:

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8.Fuel Rate: 9.Emission Control (lbs/hr)@peak torque Device Per SAE J1930	IDI, EM, TC	IDI, EM, TC		of the section of the section section section section sections section			***************************************		and lamb and an analysis of the lamb and the	Number of the control			e en de constitue en Saldin et el Communication des consentes en en en	e de colonies de la colonie de communicación de la communicación de la colonie de la c	a day beamaday mana a dahada a ayaa a ayaa a ayaa ayaa maana a aanaa a aanaa a aanaa a aanaa a aanaa a aanaa a		300000000000000000000000000000000000000	E. D. H. V. S. D. 1. S. D. T. S. D. D. S.			A STATE OF THE PARTY OF THE PAR
8.Fuel Rate: (lbs/hr)@peak torque	16.1	13.9		***************************************			The state of the s			TO THE COLUMN TWO PROPERTY AND ADDRESS OF THE COLUMN TWO	The second secon		to the sale of the	499				menter mente de es delle promotion de un montre de es			
7.Fuel Rate: mm/stroke@peak torque	44.7	38.5	The second section of the section of the second section of the section of the second section of the section of the section of the second section of the		THE CONTRACTOR OF THE CONTRACT				A STATE OF THE STA												
6.Torque @ RPM (SEA Gross)	134.2@1600	132.7@1600	manus manus manus and the contract of the second se		t en er om efter englesenske kommen ommen. Abstrellet til menne		Here the manufacture of the second se	1	A	-					TO SECTION ASSESSMENT AND ASSESSMENT ASSESSM	*			-		
5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only)	24.8	20.8	A PROPERTY OF THE PARTY OF THE		remander of a part of the facility out to be designed as a second of the state of																
4.Fuel Rate: mm/stroke @ peak HP (for diesel only)	39,4	35.5			The second of the second control of the seco							and the second s					and the second of the second o				
3.BHP@RPM (SAE Gross)	60@2800	55@2600			The first manner of manners and the second of the second o																
2.Engine Model	A2300T1	A2300T2					:													The second secon	
1.Engine Code	N/A	N/A																		THE RESERVE OF THE PARTY OF THE	