EXECUTIVE ORDER U-R-038-0057 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)		
2007	7CLL2.20C4H	2.197	Diesel	5000		
SPECIAL FEATURES & EMISSION CONTROL SYSTEMS			TYPICAL EQUIPMENT APPLICATION			
Indirect Diesel Injection			Tractor			

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			EXHAUST (g/kw-hr)				OPACITY (%)			
POWER CLASS	STANDARD CATEGORY		нс	NOx	NMHC+NOx	co	PM	ACCEL	LUG	PEAK
19 <u><</u> KW<37	Tier 2	STD	N/A	N/A	7.5	5.5	0.60	20	15	50
		CERT			5.9	1.0	0.19	3	4	5

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 2006.

Annette Hebert, Chief

Raphael Sasnowith

Mobile Source Operations Division

ATTACHIMENT I OF!

Engine Model Summary Form

4-R-038-0057

Manufacturer: ISEKI MATSUYAMA MFG. CO., LTD.

Engine category: Nonroad CI
EPA Engine Family: 7ICLL2.20C4H

Mfr Family Name: NONE

New Submission Process Code:

8. Fuel Rate: 9. Emission Control (lbs/hr)@peak torque Device Per SAE J1930 12:1@107.7 IFI FIT 11:18@102:9 IFI FIT FIT
54.240001 L
7.Fuel Rate: mm/stroke@peak torque 37/2@107.7 34:3@100.3
6.Torque @ RPM (SEA Gross) 107.7@1500 100.3@1500
5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only) (18.4@44.9 16.6@40.5
4.Fuel Rate: mm/stroke @ peak HP (for diesel only) 30.7@44.9 30.7@40.5
3.BHP@RPM (SAE Gross) [44:9@2500 (40:5@2500
1.Engine Code 2.Engine Model N/A E4CG N/A E4CG
1.Engine Code IN/A N/A N/A

Engine Model Summary Form

Manufacturer: ISEKI MATSUYAMA MFG. CO., LTD.

Engine category: Nonroad CI

EPA Engine Family: 7ICLL2,20C4H

Mfr Family Name: NONE

Process Code: Running Change

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12.1@107.7	11.1@100.3	11.8@102.9	16.7@101.8	15.3@95.9
37.2@107.7	34.3@100.3	36.4@102.9	35.0@101.8	32.1@95.9
107.7@1500	100.3@1500	102.9@1500	101.8@2200	95.9@2200
18.4@44.9	16.6@40.5	19.2@47.0	18.8@46.0	16.9@41.5
34.0@44.9	30.7@40.5	34.2@47.0	30.9@46.0	27.9@41.5
44.9@2500	40.5@2500	47.0@2600	46.0@2800	41.5@2800
E4CG	E4CG	E4CG	E4CG	E4CG
N/A	A/N	A/N	A/A	A/A
	E4CG 44.9@2500 34.0@44.9 18.4@44.9 107.7@1500 37.2@107.7	E4CG 44.9@2500 34.0@44.9 18.4@44.9 107.7@1500 37.2@107.7 E4CG 40.5@2500 30.7@40.5 16.6@40.5 100.3@1500 34.3@100.3	E4CG 44.9@2500 34.0@44.9 18.4@44.9 107.7@1500 37.2@107.7 E4CG 40.5@2500 30.7@40.5 16.6@40.5 100.3@1500 34.3@100.3 E4CG 47.0@2600 34.2@47.0 19.2@47.0 102.9@1500 36.4@102.9	E4CG 44.9@2500 34.0@44.9 18.4@44.9 107.7@1500 37.2@107.7 E4CG 40.5@2500 30.7@40.5 16.6@40.5 100.3@1500 34.3@100.3 E4CG 47.0@2600 34.2@47.0 19.2@47.0 102.9@1500 36.4@102.9 E4CG 46.0@2800 30.9@46.0 18.8@46.0 101.8@2200 35.0@101.8