## ISEKI MATSUYAMA MFG. CO., LTD.

EXECUTIVE ORDER U-R-038-0060 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	7CLL2.96D4H	2.955	Diesel	8000						
	FEATURES & EMISSION		TYPICAL EQUIPMENT APPLICATION							
	Indirect Diesel Inje	ction	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	EMISSION			E	XHAUST (g/kw-l	OPACITY (%)				
POWER CLASS	STANDARD CATEGORY		HC NOx NMHC+NOx CO		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			4.0	0.9	0.27	4	4	6

**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

Mobile Source Operations Division

## ATTACHMENT 1 OF 1

## **Engine Model Summary Form**

UR-038-0060

ISEKI MATSUYAMA MFG. CO., LTD. Manufacturer:

Nonroad Cl Engine category:

71CLL2.96D4H

EPA Engine Family:

Mfr Family Name: NONE

**New Submission** Process Code:

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9.Emission Control Device Per SAE J1930								
					99			
8.Fuel Rate: (lbs/hr)@peak torque					~	_		i la
x for	5.9@136	5.3(@132	4. (0128	5.6@134	3.8@123	5.3@133		
8.Fuel Rate: hr)@peak tor	000	9	9	000	80	30		
8.Fu	2	C.	4	15.	13	5.		
/sql				7		Sale		
				4				
7.Fuel Rate: mm/stroke@peak torque	36	32	28	34	42.7@123	33		
7.Fuel Rate: m/stroke@pe torque	48.3@136	46.6@132	4.5@128	48.2@134	9	47.3@133		
Fuel strok torc	8.3	9.9	3	8.2	7	5		
7. mm/	7	4		4	N	7.		
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≨	6	0	0	0	0	0		3
6.Torque @ RPM (SEA Gross)	136@1500	32@1500	28@1500	34@1500	23@1500	33@1500		
A G	0	0	9	0	3@	9		
Por SE	13(	13	7	13	2	13		
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9, ž. č. 2, <u>T</u> .		6.1		5.3	14	5.3		
5.Fuel Rate: os/hr) @ peak HF (for diesels only)	ગકા <b>ગેભાગ</b> ી	23.8@54.9	22.2@52.1	23.7@55.3	21,1@50.4	24.0@55.3		
Fuel dies	9	3.8(	Š	3.7(	Ĭ.	£.0(		
5.Fuel Rate: (Ibs/hr) @ peak HP (for diesels only)	2	2	7	Ŋ	N	7		
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¥ S		6	_	3	4	က		
ate: pea only	5@59°	2@54.9	1@52.1	1@55.3	3@50:4	8@55.3		
e B esel	9	20	<b>4</b>	9	30	8@		
4.Fuel Rate: mm/stroke @ peak HP (for diesel only)	6	43.	40,	44	39	42.		
nm/s						9.7		
¥ (se	9	8	00	00	90	8		
@ @ @	026	325	225	325	125	326		
3.BHP@RPM (SAE Gross)	59.1@2600	54.9@2500	52.1@250C	55.3@2500	50.4@2500	55.3@2600	H	
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Engine Code 2.Engine Model								
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## **Engine Model Summary Form**

Manufacturer: ISEKI MATSUYAMA MFG. CO., LTD.

Engine category: Nonroad CI

EPA Engine Family: 7ICLL2.96D4H

Mfr Family Name: NONE

Process Code: Running Change

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8.Fuel Rate: 9.Emission Control (lbs/hr)@peak torque Device Per SAE J1930	<b>_</b>	Œ	뜨	重	<u>E</u>	<u> </u>	<u>u</u>	:										
8.Fuel Rate: (lbs/hr)@peak torque	16.2@135.7	15.7@132.0	14.7@128.3	15.8@134.2	14.0@123.2	15.5@132.8	19.0@132.0							: :				
7.Fuel Rate: mm/stroke@peak torque	49.3@135.7	47.5@132.0	44.7@128.3	49.1@134.2	43.4@123.2	48.0@132.8	48.7@132.0										:	
6.Torque @ RPM (SEA Gross)	135.7@1500	132.0@1500	128.3@1500	134.2@1500	123.2@1500	132.8@1500	132.0@1800							:				
5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only)	27.0@59.1	23.9@54.9	22.5@52.1	23.8@55.3	21.5@50.4	24.2@55.3	25.1@56.8										:	
4.Fuel Rate: mm/stroke @ peak HP (for diesel only)	47.2@59.1	43.4@54.9	40.9@52.1	44.3@55.3	39.9@50.4	43.2@55.3	44.5@56.8											
3.BHP@RPM (SAE Gross)	59.1@2600	54.9@2500	52.1@2500	55.3@2500	50.4@2500	55.3@2600	56.8@2600									*		
2.Engine Model	E4DE	:																
1.Engine Code	N/A	N/A	N/A	N/A	A/A	N/A	N/A						±0 +0 ±0 ±0 ±0 +0 +0 +0 +0 +0 +0 +0 +0 +0 +0 +0 +0 +0			:		