EXECUTIVE ORDER U-R-038-0038

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)	
2005	5ICLL2.96D4E	2.955	Diesel	8000	
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	EMISSION		EXHAUST (g/kw-hr)			OPACITY (%)				
POWER CLASS	STANDARD CATEGORY		HC	NOx	NMHC+NOx	co	PM	ACCEL	LUG	PEAK
37 ≤ KW < 75	Tier 2	STD	N/A	N/A	7.5	5.0	0.40	20	15	50
		CERT			6.4	0.5	0.14	3	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.

Executed at El Monte, California on this \_\_\_\_\_

\_\_\_ day of January 2005.

Allen Lyons, Chief

Mobile Source Operations Division

## **Engine Model Summary Form**

ISEKI MATSUYAMA MFG. CO., LTD. Manufacturer:

Nonroad Cl Engine category:

EPA Engine Family: 5ICLL2.96D4E

Mfr Family Name: NONE

U-R-038-0038

Process Code:

Running Change

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8.Fuel Rate: 9.Emission Control lbs/hr)@peak torque Device Per SAE J1930			
9.Er Pevio			
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orde	32	4	7
8.Fuel Rate: hr)@peak tor	14.9@182	17.2@194	15.1@184
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8.1 S/hr)	+	÷	-
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<del>x</del>	2	4	4
7.Fuel Rate: mm/stroke@peak torque	45,1@182	48.8@194	45.8@184
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5.Torque @ RPM (SEA Gross)	82@1500	94@1600	34@1500
e @	@1	9	9
forque @ RP (SEA Gross)	182	194	8
6.1			
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5.Fuel Rate: s/hr) @ peak or diesels on	21.8@52.8	27.1@63.4	24.8@59.
5.Fuel Rate: (lbs/hr) @ peak HF (for diesels only)	7	2	Ö
_			25
¥ S	8	4	<b>.</b>
Sate:	25	63.	23
4.Fuel Rate: mm/stroke @ peak HP (for diesel only)	39.8@52	47.2@63.	3.4@59
4.F /stro (for c	39	47	43
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RPM SSS)	500	009	9
<u> </u>	@	@2	62
3.BHP@RPM (SAE Gross)	52.8@2500	63.4@2600	59,1@2600
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1.Engine Code 2.Engine Model			
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