ISHIKAWAJIMA-SHIBAURA MACHINERY CO., LTD.

EXECUTIVE ORDER U-R-026-0152 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)		
2006	6H3XL1.00SCV	1.005	Diesel	3000		
SPECIAL FEATURES & EMISSION CONTROL SYSTEMS			TYPICAL EQUIPMENT APPLICATION			
Indirect Diesel Injection			Tractor and 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 CATEGORY		EXHAUST (g/kw-hr)				OPACITY (%)			
			НС	NOx	NMHC+NOx	co	PM	ACCEL	LUG	PEAK
8 <u><</u> KW<19	Tier 2	STD	N/A	N/A	7.5	6.6	0.80	20	15	50
		CERT			3.6	2.5	0.36	8	14	12

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.

Raphael Surrout

Executed at El Monte, California on this ______2/37_____ day of December 2005.

Allen Lyons, Chief

Mobile Source Operations Division

ATTEMMENT 1 OF 1

Engine Model Summary Form

4-026-0152

Manufacturer: Ishikawajima-Shibaura Machinery Co., Ltd.

Engine category: Nonroad CI

EPA Engine Family: 6H3XL1.00SCV

EPA Engine Farisy: onoALL. Mfr Family Name: N/A

Process Code: New Submission

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9.Emission Control e Device Per SAE J1930		L	<u> </u>		
8.Fuel Rate: (lbs/hr)@peak torque	6,0-/+2./	4,0-/+1,8	8.1#/-0.4	8.9+/-0.5	0 0 1 1 2 0
7.Fuel Rate: mm/stroke@peak torque	21,9+/-1,4	22.3+/-1.2	22.3+/-1.2	22.4+/-1.2	22.4+/-1.2
6.Torque @ RPM (SEA Gross)	43.7@2000	44.5@2200	44.5@2200	44.3@2400	44.3@2400
5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only)	9'3+/-0'6	10,1+/-0.5	10.1+/-0.5	11.1+/-0.5	11,1+/-0.5
4.Fuel Rate: mm/stroke @ peak HP (for diesel only)	21.0+/-1.4	21.4+/-1.0	21.4+/-1.0	21,7+/-1.0	21,7+/-1.0
3.BHP@RPM (SAE Gross)	21.5@2700	23.0@2850	23.0@2850	25.0@3100	25.0@3100
2.Engine Model	22/2700	23/2850	23/2850A	25/3100	25/3100A
1.Engine Code	S773-C	S773-C	S773-C	S773-C	S773-C