California Environmental Protection Agency AIR RESOURCES BOARD	ISHIKAWAJIMA-SHIBAURA MACHINERY CO., LTD.	EXECUT

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 4H3XL1.49N3C		1.496	Diesel	3000		
SPECIAL FEATURES & EMISSION CONTROL SYSTEMS			TYPICAL EQUIPMENT APPLICATION			
Indirect Diesel Injection			Generator			

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	EMISSION STANDARD		EXHAUST (g/kw-hr)				OPACITY (%)			
CLASS	CATEGORY		нс	NOx	NMHC+NOx	со	PM	ACCEL	LUG	PEAK
8 <u><</u> KW<19	Tier 1	STD	N/A	N/A	9.5	6.6	0.80	N/A	N/A	N/A
		CERT			6.4	1.5	0.38			IN/A

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 2004.

Allen Lyons, Chief Mobile Source Operations Division

Engine Model Summary Form

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ATTACH MENT 1 のチ 1 Inufacturer: Ishikawajima-Shibaura Machinery Co., Ltd.

Manufacturer:

Nonroad Cl Engine category:

EPA Engine Family 4H3XL1.49N3C

W-R-026-0090

Mfr Family Name: N/A

New Submission Process Code:

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1.Engine Code 2.Engine Model	103-15 A KE18/1500C 17/17@1500	103-15 KE21/1800C 21.1@1800	*403C+15 - 4++++++++18/1500C++++++18/1@1500 - 4++++2/1	403C-15 HL22/1800C 21.7@1800	NB43:2 1 30.7 +1-1 800C 30.1 0 1 0 1 0 1 0 1 0 1 0 1 1 1 0 0 7 +1-1 8	
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