## ISHIKAWAJIMA-SHIBAURA MACHINERY CO., LTD.

EXECUTIVE ORDER U-R-026-0042 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-45-9;

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)
2002	2H3XM.954M30	0.954	Diesel	3000
SPECIAL	FEATURES & EMISSION	CONTROL SYSTEMS	TYPICAL EQUIPMENT	APPLICATION
	Indirect Diesel Inje	ection	Marine Propulsio	n Engine

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-l	ır)		OF	PACITY (%	6)
POWER CLASS	STANDARD CATEGORY		нс	NOx	NMHC+NOx	со	PM	ACCEL	LUG	PEAK
19 <kw<37< td=""><td>Tier 1</td><td>STD</td><td>N/A</td><td>N/A</td><td>9.5</td><td>5.5</td><td>0.80</td><td>N/A</td><td>N/A</td><td>N/A_</td></kw<37<>	Tier 1	STD	N/A	N/A	9.5	5.5	0.80	N/A	N/A	N/A_
		CERT			4.8	3.6	0.49			

**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 2001.

R. B. Summerfield, Chief

Mobile Source Operations Division

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nary Form Engine Model S.

Ishikawajima-Shibaura Machinery Co., Ltd. Manufacturer:

Nonroad Cl Engine category:

EPA Engine Family. 2H3XM.954M30

4-R-026-0042

Mfr Family Name: N/A

**New Submission** Process Code:

		3.BHP@RPM	4.Fuel Rate: mm/stroke @ peak HP ffor diesel only)	5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only)	6.Torque @ RPM (SEA Gross)	7.Fuel Rate: mm/stroke@peak torque	8.Fuel Rate: 9.Emission Control (lbs/hr)@peak torque Device Per SAE J1930	9.Emission Control Device Per SAE J193	0
1.Engine Code	2. Engine Model	(SAE GIOSS)	94.9+[-1.1]	12.6+/-0.7	42.7@2800	21.8+/-1.1	10.1+/-0.5	IFI	<b>4</b> :
MD2030	KD28/3600M	28.0@3600	1'1-1,7'17	Transparent in contract of the					-
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