ISHIKAWAJIMA-SHIBAURA MACHINERY CO., LTD.

EXECUTIVE ORDER U-R-026-0050 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) 8000			
2002	2H3XL2.00N4T	1.995	Diesel				
SPECIAL	FEATURES & EMISSION	CONTROL SYSTEMS	TYPICAL EQUIPMENT APPLICATION				
In	direct Diesel Injection,	Furbocharger	Loader 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	EMISSION				XHAUST (g/kw-h	OPACITY (%)				
POWER CLASS	STANDARD		НС	NOx	NMHC+NOx	со	PM N/A	ACCEL 20	LUG 15	PEAK 50
37 <kw<75< td=""><td>Tier 1</td><td>STD</td><td>N/A</td><td>9.2</td><td>N/A</td><td>N/A</td></kw<75<>	Tier 1	STD	N/A	9.2	N/A	N/A				
<u> </u>	1	CERT		6.2				14	10	30

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

R. B. Summerfield, Chief

Mobile Source Operations Division

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Engine Model S

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Ishikawajima-Shibaura Machinery Co., Ltd. Manufacturer:

Nonroad CI Engine category:

EPA Engine Family. 2H3XL2.00N4T

U-R-036-0050

Mfr Family Name: N/A

New Submission Process Code:

	₹:							<u>-</u>		
9.Emission Control Jevice Per SAE J1930		1F1, TC	JFI, IC							
8.Fuel Rate: 9.Emission Control (lbs/hr)@peak torque Device Per SAE J1930	15,4 +/-0.8	15.4 +/-0.8	15.0+/-0.9			and the second s				
7.Fuel Rate: mm/stroke@peak torque	41.3 +/-2.1	41.3 +/-2.1	40.2+/-2.4							
6.Torque @ RPM (SEA Gross)	114.2@1700	114.2@1700	115.8@1700							
5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only)		22.8 +/-1.3	22.6+/-1.4			e-make of states. In the case of party data was by the make of the case of the				
4.Fuel Rate: mm/stroke @ peak HP /for diesel only)	35.8 +/-2.1	35.8 +/-2.1	35.5+/-2.2							
3.BHP@RPM	(SAE GIOSS)	52.0@2900	52.0@2900							
-	2.Engine Model	N844-1-L03A	52/2900-LS170							
	1.Engine Code	138310	138399 N844T-2		A CONTRACTOR OF THE PROPERTY O					