State of California AIR RESOURCES BOARD

EXECUTIVE ORDER U-R-26-5 Relating to Certification of New Off-Road Compression-Ignition Engines

ISHIKAWAJIMA-SHIBAURA MACHINERY CO., LTD.

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:

Model Year: 2001

Typical Equipment Usage: Generator

Engina

Fuel Type: Diesel

	Engine		
-	Displacement	Useful Life	Emission Control Systems
Engine Family	(liters)	(hours)	and Special Features
1H3XL.676LCS	0.676	3000	Indirect Diesel Injection

Engine models and codes are listed on attachments. Production engines shall be in all material respects the same as those for which certification is granted.

The exhaust emission certification standards and certification values for hydrocarbons (HC), oxides of nitrogen (NOx), or non-methane hydrocarbons plus oxides of nitrogen (NMHC+NOx), carbon monoxide (CO), and particulate matter (PM) (units are expressed in grams per kilowatt-hour (g/kw-hr)), and the opacity-of-smoke certification standards and certification values in percent (%) during acceleration (Accel), lugging (Lug), and the peak value from either mode (Peak) for this engine family are as follows (Title 13, California Code of Regulations, Section 2423):

Engine Power	Emission Standard		Exhaust Emissions (g/kw-hr)					Smoke	Smoke Opacity (%)		
Rating (kw) KW<8	<u>Category</u> Tier 1	Standard	<u>HC</u> N/A	<u>NOx</u> N/A	<u>NMHC+NOx</u> 10.5	<u>CQ</u> 8.0	<u>РМ</u> 1.0	Accel N/A	<u>Lug</u> N/A	<u>Peak</u> N/A	
		Certification			4.2	2.4	8.0				

ISHIKAWAJIMA-SHIBAURA MACHINERY CO., LTD. EXECUTIVE ORDER U-R-26-5 (Page 2 of 2)

BE IT FURTHER RESOLVED: That the listed engine models also comply with "Emission Control Labels— 1996 and Later Off-Road Compression-Ignition Engines" (Title 13, California Code of Regulations, Section 2424) for the aforementioned model-year.

BE IT FURTHER RESOLVED: That for the listed engine models, the manufacturer has submitted the materials to demonstrate certification compliance with the Board's emission control system warranty provisions (Title 13, California Code of Regulations, Sections 2425 and 2426).

Engines certified under this Executive Order must conform to all applicable California emission regulations.

Executed at El Monte, California this ______ day of January 2001.

R. B. Sammerfield, Chief

Mobile Source Operations Division

ATTACHMENT

Model Year:

2001

Manufacturer: Ishikawajima-Shibaura Machinery Co.,Ltd

Engine Family: 1H3XL.676LCS

Issued: Revised: 11/6/98

11/6/2000

E.O. Number: U-R-26-5

Small Off-Road Engine Model Summary Form

Units for Table: hp

Page: 9

Worst Case?		48. Sales Code	49. Displ (cc)	50. Bore/ Stroke	51. Ignition Timing	52. Max Power	53. Rated Speed (RPM)	54. Rated Torque	55. Torque Speed (RPM).	56. Emiss Control Sys
	KL7/1500C	50-State	676	67/64	N/A	7.4	1500	N/A	N/A	IFI
X	9/1800C	50-State	676	67/64	N/A	8.7	1800	N/A	N/A	IFI
	KL9/1800C	50-State	676	67/64	N/A	9.1	1800	N/A	N/A	IFI .
		<u> </u>				and the second s		***************************************	INA	161
			The second secon				· · · · · · · · · · · · · · · · · · ·			
6 1 Mar					· ·				- ! -	
		The fact that the second of th								
		1,414. (-	27 - 17 may gradion de mario estado de la constante de la cons		
	. , . :					ws.		to company		
				H	4.		1	er er - e adament er framskriveringsprise		
***	to the second of				Andrew of Material Control of Con					
		-								:
				The second secon						
	1		:				er tilen mannen stat sakrenn 40 tennen meg jare			
					: :		: -			
4	111			-		· · · · · · · · · · · · · · · · · · ·				