ISHIKAWAJIMA-SHIBAURA MACHINERY CO., LTD.

EXECUTIVE ORDER U-R-026-0038 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	2H3XL1.13SLV	1.131	Diesel	3000						
	FEATURES & EMISSION	CONTROL SYSTEMS	TYPICAL EQUIPMENT APPLICATION							
	Indirect Diesel Inje	ction	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	EMISSION STANDARD				EXHAUST (g/kw-l	OPACITY (%)					
CLASS	CATEGORY		нс	NOx	NMHC+NOx	co	РМ	ACCEL	LUG	PEAK	
8 <u><</u> KW<19	Tier 1	STD	N/A	N/A	9.5	6.6	0.80	20	15	50	
		CERT			4.9	1.6	0.32	10	9	16	

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

ATI HCHMENT 10F1

Engine Model S. nary Form

Manufacturer: Ishikawajima-Shibaura Machinery Co., Ltd.

Engine category: Nonroad CI

EPA Engine Family. 2H3XL1.13SLV

Mfr Family Name: N/A

Process Code: New Submission

UR-026-0038

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8.Fuel Rate: 9.Emission Control (lbs/hr)@peak torque Device Per SAE J1930	14	IFI		CARROLL CALLES AND															
8.Fuel Rate: (lbs/hr)@peak torque	7.1+/-0.3	8.4+/-0.4						The second secon			The second secon								and the second s
7.Fuel Rate: mm/stroke@peak torque	25.4+/-1.2	25.6+/-1.3											-	-					
6.Torque @ RPM (SEA Gross)	47.9@1700	50.0@2000																-	
5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only)	8.1+/0.4	10.4+/-0.5							A CAMPADA AND AND AND AND AND AND AND AND AND								The state of the s		
4.Fuel Rate: mm/stroke @ peak HP (for diesel only)	22.4+/-1.2	24.4+/-1.3		Commission of the commission o			er gegen men mellem men de de degre geregen gegende mensele betet betet de men	18 11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1						-	AND THE PROPERTY AND THE PROPERTY OF THE PROPE	AND AND THE REAL PROPERTY OF THE PROPERTY OF T		de de la companya de	
3.BHP@RPM (SAE Gross)	18.2@2200	24.0@2600									American de la companya de la compa	And the control of th			e compression de la compression della compressio				
2.Engine Model	19/2200	TC24/2600						TOWNS THE THE TOWN TO THE TOWN TO THE TOWN THE T	er commente de la commença de la commenta de la commente del la commente de la commente de la commente del la commente de la commente del la commente de la commente del la commente de la commente del la commente del la commente del la commente de	A DESCRIPTION OF THE PROPERTY				 The state of the s		er en	The second secon		
1.Engine Code	3YE1PA01	S773L			And the state of t	The state of the s			The state of the s	And the same of th								market in the second se	The state of the s

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