

ISHIKAWAJIMA-SHIBAURA MACHINERY CO., LTD.

EXECUTIVE ORDER U-R-026-0059 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-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)						
2003	3H3XL.676E3V	0.676	Diesel							
SPECIAL I	FEATURES & EMISSION	CONTROL SYSTEMS	TYPICAL EQUIPMENT APPLICATION							
	Indirect Diesel Inje	ection	Loader, Generator 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				EXHAUST (g/kw-l	OF	PACITY (%)				
CLASS	STANDARD		HC	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	20	15	50	
		CERT			5.9	3.2	0.61	10	11	19	

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 2003.

Allen Lyons, Chief

Mobile Source Operations Division

ATTACHMENT 1 OF1

Engine Model Summary Form

Manufacturer: Ishikawajima-Shibaura Machinery Co., Ltd.

Engine category: Nonroad CI

EPA Engine Family: 3H3XL.676E3V

Mfr Family Name: N/A

Process Code: New Submission

u-R-026-0059

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8.Fuel Rate: 9.Emission Control (lbs/hr)@peak torque Device Per SAE J1930	14	<u>L</u>	F	H	4	빌	ഥ	FI					A STATE OF THE STA				- Committee of the comm	A THE THE PROPERTY OF THE PROP		- V	The second state of the se	The state of the s					
8.Fuel Rate: (lbs/hr)@peak torque	5.0+/-0.2	N/A	N/A	4.9+/-0.2	5.1+/-0.3	5.9+/-0.3	5.0+/-0.2	6.3+/-0.3				The second secon	:				THE RESERVE OF THE PROPERTY OF	de priminante de la companya del companya de la companya del companya de la companya del la companya de la comp							Aleksan and a second a second and a second a		
7.Fuel Rate: mm/stroke@peak torque	14.5+/-0.7	N/A	N/A	14.1+/-0.7	14.2+/-0.7	15.0+/-0.8	15.0+/-0.7	15.3+/-0.8				* of ** 1 1 1 1 1 1 1 1 1	Account Communication and the property of the communication of the commu								en per per la colonia de colonia de l'Hill RENERVIA CONTRACTO CONT					AND THE CONTRACT OF THE CONTRA	
6.Torque @ RPM (SEA Gross)	27.5@2100	N/A	N/A	28.1@2100	28.4@2200	28.2@2400	28.8@2000	28.3@2500	And a control of the			44 4 1 2 2 2 1 1 2 2 2 2 2 2 2 2 2 2 2 2	A CONTRACTOR OF THE CONTRACTOR					The state of the s		The second control of						e de la companya de l	
5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only)	6.1+/-0.3	6.5+/-0.3	7.8+/-0.4	6.5+/-0.3	6.9+/-0.3	8.8+/-0.6	5.8+/-0.4	7.8+/-0.3			and the state of t					memokan da kada dapat da taka dalah dari kada dalah dalah dalah da taka da taka da taka da taka da taka da tak	A CANADA III DA LA CANADA CANA		ALCOHOLOGICA CANADA CAN				THE STATE OF THE S	Prof. p. 1.		Alle Selection of the Common C	A LAN MARINE MARINE PROPERTY I STATEMENT OF THE STATEMENT
4.Fuel Rate: mm/stroke @ peak HP (for diesel only)	13.2+/-0.7	13.2+/-0.7	13.1+/-0.6	14.0+/-0.7	14.1+/-0.7	14.8+/-1.0	14.2+/-0.9	13.9+/-0.6					Name of the Control o				e manus de la Colonia de l						A December of the Property of				rannon i additata dell'indiperatoro rannon controlla dell'indiperatoro primera
3.BHP@RPM (SAE Gross)	13.7@2800	14.2@3000	16.1@3600	15.0@2800	15.7@2950	18.0@3600	13.3@2500	16.5@3400	A MARKATA PROPERTY TO THE PROPERTY OF THE PROP	Andrew I I was to specify the management of the latest and the latest and the latest of the latest o			TO THE	MANAGER I FERRENCH COMMENT COMMENT CONTRACTOR CONTRACTO	ALAN ANTONIA A	The state of the s	and all the safe to Fragging a management of a material to page parameters and the mental and the safe and th			The state of the s		. No. 1 . 1 . 1 . 1 . 1 . 1 . 1 . 1 . 1 . 1			The second state of the second	AND THE PERSON OF THE PERSON O	The filtransminister of grant to the first the first of t
2.Engine Model	KL14/2800	KL14/3000G	KL15/3600G	KL16/2800	KL16/2950	KL18/3600	13/2500	17/3400-L250		AND THE PERSON OF THE PERSON O			A CONTRACT OF THE PROPERTY OF			A MARINE OF THE THE PARTY OF TH	A STATE OF THE PROPERTY OF THE	an earlied the character and space on produce of the history of the state of the st				ide district the Villagery specimens and describe the specimen of mathematical frameworks.	To the second of the second se	And the control of the second		and the state of t	THE REAL PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PARTY.
1.Engine Code	103-07	103-07	103-07	103-07	103-07	103-07	3YA1PA01	E673		AND ADDRESS OF THE PERSON OF T				ter part men en men produktetete gran en er propa artikale, ett tettagen men en			Military (1) to prove the construction of the best (1) then makes the second of the se	***************************************				PARTIES AND AND AND ADDRESS OF THE PROPERTY AND ADDRESS AND ADDRES				and the same of th	All the later of the contract