

## ISHIKAWAJIMA-SHIBAURA MACHINERY CO., LTD.

EXECUTIVE ORDER U-R-026-0039 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.676M20	0.676	Diesel							
SPECIAL.	FEATURES & EMISSION	CONTROL SYSTEMS	TYPICAL EQUIPMENT APPLICATION							
	Indirect Diesel Inje	ection	Marine Propulsion 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 POWER	EMISSION STANDARD				EXHAUST (g/kw-ł	<del></del>	OPACITY (%)					
CLASS	CATEGORY		нс	NOx	NMHC+NOx	co	PM	ACCEL	LUG	PEAK		
8 <u>&lt;</u> KW<19	Tier 1	STD	N/A	N/A	9.5	6.6	0.80	N/A	N/A	N/A		
		CERT			4.6	1.3	0.41					

**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

ATTER NEWT 10F1

Engine Model . nary Form

Manufacturer: Ishikawajima-Shibaura Machinery Co., Ltd.

Engine category: Nonroad CI

EPA Engine Family: 2H3XM.676M20

U-R-026-0039

Mfr Family Name: N/A

Process Code: New Submission

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8.Fuel Rate: 9.Emission Control (lbs/hr)@peak torque Device Per SAE J1930	141					· · · · · · · · · · · · · · · · · · ·								-										
	6.4+/-0.3				a maramana mena ara kerana erandererand di deperterera del deservar eranera del del del					-								de de la companya de						
7.Fuel Rate: mm/stroke@peak torque	16.1+/-0.8				A STATE OF THE PROPERTY OF THE			A ALADAMAN AND THE WORLD WITH MENTAL BROWNING THE PROPERTY OF	and the state of t	The state of the s									referência e referência e remanenta de la communica e communica e constitución de la composição de la compos					
6.Torque @ RPM (SEA Gross)	28.9@2400	The state of the s			A 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1		######################################	A PARTIE AND A PAR	. A bizatriala, estatrialara i meraterni envi en un mereterni mereverne elektrologist, el-derekiste		e e de la composition della co							in the community of the contract of the contra	e de la composition			A CONTRACTOR OF THE CONTRACTOR	AND THE COMMENT OF THE COMENT OF THE COMMENT OF THE	ame some summare es properties established in the state of the second state of the second state of the second seco
5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only)	8.6+/-0.4	AND A SERVICE OF THE					orași de la compania	And Andrews in the Control of the Co	A CONTRACTOR OF THE CONTRACTOR			A CONTRACT OF THE CONTRACT OF				AND AND THE PROPERTY OF THE PR		To see the contract of the con	And the same of th	A COLUMN TO THE REAL PROPERTY OF THE PROPERTY	and a series of the second	The state of the s		RAME AND
4.Fuel Rate: mm/stroke @ peak HP (for diesel only)	14.5+/-0.6	remainden med statement er met er transporter transpor						AND	metama akuban akuban akuban akuban akuban kungun kungun kan perinci aku kungun kungun kungun pengun pengun pen			A COLUMN TO A COLUMN TO THE STATE OF THE STA	AND THE REAL PROPERTY OF THE P		AND	AND	The state of the s			And the state of t	A A A A A A A A A A A A A A A A A A A	dentiment of the second of the	and designed the second consistency of the second constitution of the secon	
3.BHP@RPM (SAE Gross)	18.5@3600												AND THE REPORT OF THE PROPERTY		the state of the s				A CONTRACTOR OF THE PROPERTY O					
2.Engine Model	KL19/3600M	The second state of the second		The second of the second secon	AT THE REPORT OF THE PARTY OF T			The section that the same payments are the same and same payments and the same same same same same same same s	THE RESERVE THE PROPERTY OF TH		And the second s	The state of the s	A THE CONTRACT OF THE PROPERTY		A THE REST OF THE PARTY OF THE	AMERICAN STREET, CONTRACTOR OF THE SECOND STREET, CO. STREET, CO. STREET, CO. STREET, CO. STREET, CO. STREET,			AND THE PROPERTY OF THE PROPER	tal for the entropy of the first of the second of the seco		and the second s	The state of the s	THE THE PARTY OF T
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