

IHI SHIBAURA MACHINERY CORPORATION

EXECUTIVE ORDER U-R-026-0224 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)
2008	8H3XL2.22N4L	2.216	Diesel	8000
SPECIAL	FEATURES & EMISSION	CONTROL SYSTEMS	TYPICAL EQUIPMENT	APPLICATION
	Indirect Diesel Inje	ection	Loader, Tractor and Indu	strial 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				EXHAUST (g/kw-	hr)		OF	PACITY (%	a)
POWER	STANDARD CATEGORY		нс	NOx	NMHC+NOx	co	PM	ACCEL	LUG	PEAK
37 <u><</u> KW<56	Tier 4 Interim	STD	N/A	N/A	4.7	5.0	0.30	20	15	50
		CERT			4.5	1.8	0.26	4	3	7

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 February 2008.

Annette Hebert, Chief

Mobile Source Operations Division

Engine Model Summary Template

ATTACHMENT 1 OF 1

45-036-033H

Engine Family	1.Engine Code	Engine Family 1.Engine Code 2.Engine Model	3.BHP@RPM (SAE Gross)	4.Fuel Rate: 5.Fuel Rate: mm/stroke @ peak HP (lbs/hr) @ peak HP 6.Torque @ RPM (for diesel only) (SEA Gross)	5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only)	6.Torque @ RPM (SEA Gross)	7.Fuel Rate: mm/stroke@peak torque		8.Fuel Rate: 9.Emission Control (lbs/hr)@peak torqueDevice Per SAE J1930
8H3XL2.22N4L	404C-22	HP50/2800	50.0@2800	34.7+/-3.2	21.3+/-2.0	105.5@1800	37.1+/-3.6	14.7+/-1.4	dichinantinan dichinantinan di camana di caman
3H3XL2,22N4L	404D-22	GN50/2800	50.0@2800	35.0+/-2.6	21.5+/-1.6	105.5@1800	36.3+/-2.6	14.3+/-1.0	Manua H. Ladou de Carlos d
8H3XL2.22N4L	404D-22	GN51/3000	51.0@3000	34,4+/-2.0	22.7+/-1.3	105.5@1800	36.3+/-2.6	14.3+/-1.0	SERVICE CONTRACTOR CON
3H3XL2.22N4L	C2.2	GN50/2800	50.0@2800	35.0+/-2.6	21.5+/-1.6	105.5@1800	36.3+/-2.6	14.3+/-1.0	Ħ
3H3XL2.22N4L	C2.2	GN51/3000	51.0@3000	34,4+/-2.0	22.7+/-1.3	105.5@1800	36.3+/-2.6	14.3+/-1.0	14
3H3XL2.22N4L	N844L-D	50D/2800	50.0@2800	34.7+/-3.2	21.3+/-2.0	105.5@1800	37.1+/-3.6	14.7+/-1.4	And street married properties.