## Mitsubishi Heavy Industries, Ltd.

EXECUTIVE ORDER U-R-035-0040

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
2003	3MVXL01.5BBB	1.5	Diesel	(hours) 5000
SPECIAL I	FEATURES & EMISSION	CONTROL SYSTEMS	TYPICAL EQUIPMENT	
Inc	direct Diesel Injection, T	urbocharger	Tractor	

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):

STANDARD		<u> </u>	<u>_</u>	XHAUST (g/kw-h	ır)		OF	ACITY (%	6)
CATEGORY		HC	NOx	NMHC+NO <sub>X</sub>	CO	PM	ACCEL	LUG	PEAK
Tier 1	STD	N/A	N/A	9.5	5.5	0.80			50
	CERT			4.1			7	- 3-	30
		Tier 1 STD	Tier 1 STD N/A	Tier 1 STD N/A N/A	Tier 1 STD N/A N/A 9.5	Tier 1 STD N/A N/A 9.5 5.5	Tier 1 STD N/A N/A 9.5 5.5 0.80	Tier 1 STD N/A N/A 9.5 5.5 0.80 20	Tier 1         STD         N/A         N/A         9.5         5.5         0.80         20         15

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 27th day of January 2003.

Aller Lyons, Chief

Mobile Source Operations Division

Manufacturer: Mitsubishi Heavy Industries, Ltd.

Engine category: Nonroad Cl

EPA Engine Family\_3MVXL01.5BBB

Mfr Family Name: S4L-T

Process Code: New Submission

U-R-035-0040

(a) HPM   num/stroke expeak   8 Fuel Pate: 9 Emission Control tross)   lorque   (lbs/ln) expeak torque   Device Per SAE J1930   22200   26.8   15.9   ID    7.25   4.0   2200   31.9   15.5   10.5   1	6 Torque @ HPM nin/stroke@ (SEA Gross) lorque	(tor diesels only) (for diesels only)  18.2  22.5  21.0	M mm/stroke @ peak   (for diesel only) )0 27.2 )0 34.0 )0 31.6	2.Engine Model (SAE Gross)  S4L2-T 49.3@3000  S4L2-T 46.9@3000	1.Engine Code 2.Engi S4L-Y1T62ST S4 S4L2-Y1TEPA S4 S4L2-Y1T62W S4