California Environmental Protection Agency AIR RESOURCES BOARD	MITSUBISHI HEAVY INDUSTRIES, LTD.	EXECUTIVE ORDER U-R-035-0258 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)
2009	9MVXL01.0DDD	0.6, 1.0	Diesel	3000

SPECIAL FEATURES & EMISSION CONTROL SYSTEMS	TYPICAL EQUIPMENT APPLICATION
Indirect Diesel Injection	Tractor, 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 CLASS	EMISSION STANDARD CATEGORY		EXHAUST (g/kw-hr)					OPACITY (%)		
			HC	NOx	NMHC+NOx	CO	PM	ACCEL	LUG	PEAK
8 ≤ KW < 19	Tier 4	STD	N/A	N/A	7.5	6.6	0.40	20	15	50
		CERT	--	--	5.6	2.5	0.34	9	11	14

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 22nd day of January 2009.

Raphael Susnowitz

for Annette Hebert, Chief
Mobile Source Operations Division

ATTACHMENT 1 OF 1

Engine Model Summary Template

U-R-035-0258

Engine Family	1.Engine Code	2.Engine Model	3.BHP@RPM (SAE Gross)	4.Fuel Rate: mm/stroke @ peak HP (for diesel only)	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: (lbs/hr)@peak torque	9.Emission Control Device Per SAE J1930
9MVXL01.0DDD	L2E-3600	L2E	15.1hp@3600	20.0	7.9	22.1ftlb@2700	20.0	5.9	IDI
9MVXL01.0DDD	L2E-W461DPH	L2E	15.1hp@3600	20.0	7.9	22.1ftlb@2700	20.0	5.9	IDI
9MVXL01.0DDD	L2E-W461DPHA	L2E	15.1hp@3600	20.0	7.9	22.1ftlb@2700	20.0	5.9	IDI
9MVXL01.0DDD	L2E-W461DPA	L2E	15.1hp@3600	20.0	7.9	22.1ftlb@2700	20.0	5.9	IDI
9MVXL01.0DDD	L2E-W461TRGH	L2E	15.1hp@3600	20.0	7.9	22.1ftlb@2700	20.0	5.9	IDI
9MVXL01.0DDD	L2E-W462WMG	L2E	15.1hp@3600	20.0	7.9	22.1ftlb@2700	20.0	5.9	IDI
9MVXL01.0DDD	L2E-W462SGHM	L2E	15.1hp@3600	20.0	7.9	22.1ftlb@2700	20.0	5.9	IDI
9MVXL01.0DDD	L2E-W462WM	L2E	15.1hp@3600	20.0	7.9	22.1ftlb@2700	20.0	5.9	IDI
9MVXL01.0DDD	L3E-1800	L3E	12.5hp@1800	18.0	5.3	36.4ftlb@1800	18.0	5.3	IDI
9MVXL01.0DDD	L3E-W461DG	L3E	12.5hp@1800	18.0	5.3	36.4ftlb@1800	18.0	5.3	IDI
9MVXL01.0DDD	L3E-W461CG	L3E	12.5hp@1800	18.0	5.3	36.4ftlb@1800	18.0	5.3	IDI
9MVXL01.0DDD	L3E-W461ML	L3E	12.5hp@1800	18.0	5.3	36.4ftlb@1800	18.0	5.3	IDI
9MVXL01.0DDD	L3E-W461AL	L3E	12.5hp@1800	18.0	5.3	36.4ftlb@1800	18.0	5.3	IDI
9MVXL01.0DDD	L3E-W462SD	L3E	12.5hp@1800	18.0	5.3	36.4ftlb@1800	18.0	5.3	IDI
9MVXL01.0DDD	L3E-W461WM	L3E	12.5hp@1800	18.0	5.3	36.4ftlb@1800	18.0	5.3	IDI
9MVXL01.0DDD	L3E-2100	L3E	15.7hp@2100	19.8	6.8	39.3ftlb@2100	19.8	6.8	IDI
9MVXL01.0DDD	L3E-W4SCMC	L3E	15.7hp@2100	19.8	6.8	39.3ftlb@2100	19.8	6.8	IDI
9MVXL01.0DDD	L3E-2200A	L3E	15.7hp@2200	19.0	6.9	40.0ftlb@1800	20.5	6.1	IDI
9MVXL01.0DDD	L3E-W431KBS	L3E	15.7hp@2200	19.0	6.9	40.0ftlb@1800	20.5	6.1	IDI
9MVXL01.0DDD	L3E-2200	L3E	16.1hp@2200	19.8	7.2	39.1ftlb@1800	20.0	5.9	IDI
9MVXL01.0DDD	L3E-W464ESA	L3E	16.1hp@2200	19.8	7.2	39.1ftlb@1800	20.0	5.9	IDI
9MVXL01.0DDD	L3E-2300	L3E	17.3hp@2300	20.0	7.2	41.2ftlb@2000	20.8	6.9	IDI
9MVXL01.0DDD	L3E-W461DW	L3E	17.3hp@2300	20.0	7.2	41.2ftlb@2000	20.8	6.9	IDI
9MVXL01.0DDD	L3E-2600	L3E	17.3hp@2600	18.2	7.8	39.8ftlb@1800	20.4	6.0	IDI
9MVXL01.0DDD	L3E-W411RH	L3E	17.3hp@2600	18.2	7.8	39.8ftlb@1800	20.4	6.0	IDI
9MVXL01.0DDD	L3E-2400	L3E	17.4hp@2400	18.2	7.2	36.2ftlb@1800	17.6	5.2	IDI
9MVXL01.0DDD	L3E-W431NSA	L3E	17.3hp@2400	18.2	7.2	36.2ftlb@1800	17.6	5.2	IDI