

 AIR RESOURCES BOARD	MITSUBISHI HEAVY INDUSTRIES, LTD.	EXECUTIVE ORDER U-R-035-0205
		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)
2007	7MVXL01.8AAA	1.1, 1.3, 1.5, 1.8	Diesel	5000
SPECIAL FEATURES & EMISSION CONTROL SYSTEMS			TYPICAL EQUIPMENT APPLICATION	
Indirect Diesel Injection			Tractor, Dozer, Generator	

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 (NO_x), or non-methane hydrocarbon plus oxides of nitrogen (NMHC+NO_x), 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):

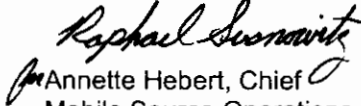
RATED POWER CLASS	EMISSION STANDARD CATEGORY		EXHAUST (g/kw-hr)					OPACITY (%)		
			HC	NO _x	NMHC+NO _x	CO	PM	ACCEL	LUG	PEAK
19 ≤ KW < 37	Tier 2	STD	N/A	N/A	7.5	5.5	0.60	20	15	50
		CERT	--	--	6.3	1.4	0.47	5	7	9

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 December 2006.


 Annette Hebert, Chief
 Mobile Source Operations Division

Engine Model Summary Template

ATTACHMENT 1 OF 2

U-R-035-0205

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
MVXL01.8AAA	S3L-Y261DPA	S3L	26.0@3000	24.9	12.2	45.7@2200	23.3	8.4	IDI
MVXL01.8AAA	S3L-Y261DPH	S3L	26.0@3000	24.9	12.2	45.7@2200	23.3	8.4	IDI
MVXL01.8AAA	S3L2 19.9KW-01	S3L2	26.7@2300	29.3	11.1	60.0@1700	28.1	7.9	IDI
MVXL01.8AAA	S3L2 19.9KW-03	S3L2	26.7@2300	29.3	11.1	60.0@1700	28.1	7.9	IDI
MVXL01.8AAA	S3L2 20.4KW-01	S3L2	27.3@2400	29.3	11.6	59.7@1700	28.1	7.9	IDI
MVXL01.8AAA	S3L2-E2SCMF	S3L2	27.1@2350	29.3	11.1	60.0@1700	28.8	10.2	IDI
MVXL01.8AAA	S3L2-Y214R	S3L2	26.3@2600	27.0	11.6	60.3@1600	28.5	7.5	IDI
MVXL01.8AAA	S3L2-Y214RH	S3L2	26.3@2600	27.0	11.6	60.3@1600	28.5	7.5	IDI
MVXL01.8AAA	S3L2-Y261DPA	S3L2	28.4@3000	25.0	12.4	50.6@2200	24.3	8.8	IDI
MVXL01.8AAA	S3L2-Y261DPH	S3L2	28.4@3000	25.0	12.4	50.6@2200	24.3	8.8	IDI
MVXL01.8AAA	S3L2-Y261TM	S3L2	26.7@2700	27.1	12.1	58.5@1800	28	8.3	IDI
MVXL01.8AAA	S3L2-Y262WMA	S3L2	31.0@3000	26.4	12.96	56.7@1700	26.3	9.5	IDI
MVXL01.8AAA	S3L2-Y2SCME	S3L2	26.7@2300	29.3	11.1	60.0@1700	28.1	7.9	IDI
MVXL01.8AAA	S4L 26.0KW-01	S4L	34.9@3000	23.5	15.5	64.5@2200	25.1	12.1	IDI
MVXL01.8AAA	S4L-Y162ST	S4L	34.9@3000	23.5	15.5	64.5@2200	25.1	12.1	IDI
MVXL01.8AAA	S4L-Y261DPA	S4L	35.1@3000	22.7	14.9	65.1@2200	22.7	10.9	IDI
MVXL01.8AAA	S4L-Y261DPH	S4L	35.1@3000	22.7	14.9	65.1@2200	22.7	10.9	IDI
MVXL01.8AAA	S4L-Y261GT	S4L	28.2@2600	21.0	12.0	60.8@1800	21.6	8.6	IDI
MVXL01.8AAA	S4L-Y261TM	S4L	29.4@2700	22.8	13.5	60.3@1800	23.3	9.2	IDI
MVXL01.8AAA	S4L-Y262GT	S4L	28.2@2600	21.0	12.0	60.8@1800	21.6	8.6	IDI
MVXL01.8AAA	S4L-Y262KL	S4L	25.8@2200	22.5	10.9	61.2@2000	22.3	9.8	IDI
MVXL01.8AAA	S4L-Y262STA	S4L	34.9@3000	23.5	15.5	64.5@2200	25.1	12.1	IDI
MVXL01.8AAA	S4L2 22KW-01	S4L2	29.5@2100	25.8	11.9	74.5@1800	26.4	10.4	IDI
MVXL01.8AAA	S4L2-EPA-1	S4L2	38.5@2700	28.4	16.8	86.8@1600	31.9	11.2	IDI
MVXL01.8AAA	S4L2-Y161GT	S4L2	38.0@2700	28.0	16.6	75.9@1800	26.5	10.5	IDI
MVXL01.8AAA	S4L2-Y162GT	S4L2	38.0@2700	28.0	16.6	75.9@1800	26.5	10.5	IDI

ATTACHMENT 2 of 2

Engine Model Summary Template

U-R-035-0205

Engine Family	1. Engine Code	2. Engine Model	3. BHP@RPM (SAE Gross)	4. Fuel Rate:		5. Fuel Rate:		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
				mm/stroke @ peak HP (for diesel only)	mm/stroke @ peak HP (for diesels only)	lbs/hr @ peak HP (for diesels only)	lbs/hr @ peak torque				
MVXL01.8AAA	S4L2-Y214R	S4L2	36.5@2700	26.2	15.0	79.7@1600	27.8	9.5	IDI		
MVXL01.8AAA	S4L2-Y261CG	S4L2	25.5@1800	26.4	10.4	74.1@1350	26.5	7.8	IDI		
MVXL01.8AAA	S4L2-Y261DG	S4L2	25.5@1800	26.4	10.4	74.1@1350	26.5	7.8	IDI		
MVXL01.8AAA	S4L2-Y261DPA	S4L2	38.6@3000	25.4	16.5	71.3@2200	24.7	11.9	IDI		
MVXL01.8AAA	S4L2-Y261DPH	S4L2	38.6@3000	25.4	16.5	71.3@2200	24.7	11.9	IDI		
MVXL01.8AAA	S4L2-Y261MIL	S4L2	25.5@1800	26.4	10.4	74.1@1350	26.5	7.8	IDI		
MVXL01.8AAA	S4L2-Y261TM	S4L2	35.5@2700	26.9	15.9	73.7@1800	27.0	10.7	IDI		
MVXL01.8AAA	S4L2-Y261WM	S4L2	25.5@1800	26.4	10.4	74.1@1350	26.5	7.8	IDI		
MVXL01.8AAA	S4L2-Y262SD	S4L2	25.5@1800	26.4	10.4	74.1@1350	26.5	7.8	IDI		
MVXL01.8AAA	S4L2-Y262WMA	S4L2	41.4@3000	27.8	18.3	76.7@2400	27.3	14.4	IDI		
MVXL01.8AAA	S4L2-Y263GT	S4L2	38.0@2700	28.0	16.6	75.9@1800	26.5	10.5	IDI		
MVXL01.8AAA	S4L2-Y264GT	S4L2	28.0@2700	28.0	16.6	75.9@1800	26.5	10.5	IDI		