## MITSUBISHI HEAVY INDUSTRIES, LTD.

EXECUTIVE ORDER U-R-035-0341

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.

ENGINE FAMILY	DISPLACEMENT (liters)	FUEL TYPE	USEFUL LIFE (hours)		
CMVXL03.3AAC	3.3	Diesel	8000		
		TYPICAL EQUIPMENT APPLICATION			
chanical Direct Injection,	Turbocharger	Generator			
	CMVXL03.3AAC	CMVXL03.3AAC 3.3	CMVXL03.3AAC 3.3 Diesel  FEATURES & EMISSION CONTROL SYSTEMS TYPICAL EQUIPMENT A		

The engine models and codes are attached.

The following are the exhaust certification standards (STD) and certification levels (CERT) for non-methane hydrocarbon (NMHC), 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)					OPACITY (%)		
	STANDARD CATEGORY		NMHC	NOx	NMHC+NOx	со	₽M	ACCEL	LUG	PEAK
37 ≤ KW < 56	Interim Tier 4	STD	N/A	N/A	4.7	5.0	0.30	N/A	N/A	N/A
		CERT			4.2	1.2	0.25			

**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 April 2012.

Annette Hebert, Chief

Mobile Source Operations Division

## ATTACHMENT 1 OF 1

## **Engine Model Summary Template**

11-R-035-0341 4/17/2012

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: 9.Emission Control (lbs/hr)@peak torqueDevice Per SAE J1930	
CMVXL03.3AAC	S4S-Y3DT61SD	S4S-DTB	60HP@1800	59	24			ріјc	AND AND ADDRESS OF THE PARTY OF
CMVXL03.3AAC	S4S-Y3DT65DG	S4S-DTB	60HP@1800	59	24	e na kandinana kandinana kandinana makana makana kandinan kandinan kandinan kandinan kandinan kandinan kandina	ik di dikiki mangan kala kala kala kala kala kala kala ka	DITC	gym andr mar saa, na a ngran ang na a na