Mitsubishi Heavy Industries, Ltd.

EXECUTIVE ORDER U-R-035-0133 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	
2004	4MVXL65.4ABH	65.37	Diesel	(hours) 8000	
SPECIAL FEATURES & EMISSION CONTROL SYSTEMS			TYPICAL EQUIPMENT APPLICATION		
Direct Diesel Injection, Turbocharger, Charge Air Cooler, Engine Control Module			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 (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):

CIACO			EXHAUST (g/kw-hr)				OPACITY (%)			
CLASS	CATEGORY		HC	NOx	NMHC+NO _X	СО	PM	ACCEL	LUG	PEAK
KW > 560	Tier 1	STD	1.3	9.2	N/A	11.4	0.54	N/A	 	
	7	CERT	0.6	8.6		0.6	0.15	IN/A	N/A	N/A

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 ____3/57___ day of December 2003.

Állen Lyons, Chief 🗸

Mobile Source Operations Division

Engine Model Summary Form

ATTACHMENT 1 OF 1,

Mitsubishi Heavy Industries, Ltd. Manufacturer:

Engine category: Nonroad Cl EPA Engine Family. 4MVXL65.4ABH

W-R-035-0133

Mfr Family Name: SRV-TAW

Process Code:

New Submission

	4.3	
8.Fuel Rate: 9.Emission Control (lbs/hr) @peak torque Device Per SAE J1930	ECM, DITC, SA	316R-Y1PTAW2-1 S16R-PTAW 2889@1800 638
8.Fuel Rate: (lbs/hr)@peak torque	NA	
7.Fuet Rate: mm/strokë@peak torque	NA	
6.Torque @ RPM (SEA Gross)	VIV	UN
5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only)		994
4.Fuel Rate: 5.Fuel Rate: mm/stroke @ peak HP (lbs/hr) @ peak HP	(ior dieser or in)	638
3.BHP@RPM	(SAE Gross)	2889@1800
	2.Engine Model	S16R-PTAW
	1.Engine Code	S16R-YIPTAW2-1 S16R-PTAW 2889@1800 638