## Mitsubishi Heavy Industries, Ltd.

EXECUTIVE ORDER U-R-035-0142
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)		
2005	5MVXL24.5ABB	24.51	Diesel	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):

RATED	EMISSION STANDARD CATEGORY		EXHAUST (g/kw-hr)					OPACITY (%)		
POWER CLASS			нс	NOx	NMHC+NOx	co	PM	ACCEL	LUG	PEAK
KW > 560	Tier 1	STD	1.3	9.2	N/A	11.4	0.54	N/A	N/A	N/A
		CERT	0.6	8.5		0.7	0.22			

**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 December 2004.

Allen L**y**ons, Chief

Mobile Source Operations Division

## Engine Model S: mary Form

Manufacturer: Mitsubishi Heavy Industries, Ltd.

Engine category: Nonroad Cl

EPA Engine Family: 5MVXL24.5ABB

Mfr Family Name: SR-TA

Process Code: New Submission

8-10-580-0145

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9.Emission Control Device Per SAE J193	FCM, DITC, CAC.	DITC	DITC	DITC	DITC	/ DITC /	
8.Fuel Rate: 9.Emission Control (Ibs/hr)@peak torque Device Per SAE J1930	NA	NA	NA	NA	NA	NA	
7.Fuel Rate: mm/stroke@peak torque	Ϋ́Ν	NA	NA	AN	NA	NA	
6.Torque @ RPM (SEA Gross)	NA	NA	NA	NA	NA	NA	
5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only)	333	326	325	325	271	272	
4.Fuel Rate: mm/stroke @ peak HP (for diesel only)	566	555	553	553	554	556	
3.BHP@RPM (SAE Gross)	878@1800	898@1800	898@1800	898@1800	782@1500	782@1500	
2.Engine Model	S6R-PTA	S6R-PTA	S6R-PTA	S6R-PTA	S6R-PTA	S6R-PTA	
1.Engine Code	S6R-Y1PTA-2	S6R-Y1PTA-3	S6R-Y1PTA-4	D600 24.5A60	S6R-Y1PTA-5	S6R-Y1PTA-6.	