EXECUTIVE ORDER U-R-035-0043 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	
2003	3MVXL02.3BBB	2.3	Diesel	(hours) 5000	
SPECIAL F	EATURES & EMISSION (CONTROL SYSTEMS	TYPICAL EQUIPMENT A	PPLICATION	
Di	irect Diesel Injection, Tu	rbocharger	Tractor		

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	EMISSION STANDARD				EXHAUST (g/kw-ł	ır)		· · · · · · · · · · · · · · · · · · ·	PACITY (9	
CLASS 19< KW < 37	CATEGORY		НС	NOx	NMHC+NOx	со	PM	ACCEL	LUG	PEAK
107 104 131	Tier 1	STD	N/A	N/A	9.5	5.5	0.80	20	15	50
		CERT			7.9	1.8	0.55	3	3	5

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 January 2003.

Allen Lyons, Chief

Mobile Source Operations Division

ATTACHMENT 1 OF 1

Engine Model Sc mary Form

Manufacturer: Mitsubishi Heavy Industries, Ltd.

Engine category: Nonroad CI

EPA Engine Family.__3MVXL02.3BBB

Mfr Family Name: K4N-DT

Process Code: New Submission

u-R-035-0043

1.Engine Code 2.Engine Model (SAE Gross) K4N-Y1DT K4N-DT 45.3@2600 K4N-Y1DT11A K4N-DT 45.3@2600 K4N-Y1DT12A K4N-DT4: 45.3@2600	4. Fuel Rale: PRPM mm/stroke @ peak Hill ross) (for dieset only) 2600 33.5 2600 33.5	5. Fuel Rate: ((bs/hr) @ peak HP (for diesets only) 19.1 19.1	7.Fu (6.Torque @ RPM mn/str (5EA Gross) 10 108.5@1600 108.5@1600	7. Fuel Rate: num/stroke@peak 8. Fuel Rate: lorque (lbs/hr)@peak torqu 33.8 11.9 33.8 11.9	8. Fuel Rate: 9. Emission Control (lbs/hr) @ peak torque Device Per SAE J1930 11.9 11.9 DITC