MAHINDRA & MAHINDRA LTD.

EXECUTIVE ORDER U-R-043-0036 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	7MMLL03.2NET	3.192	Diesel	8000		
SPECIAL FEATURES & EMISSION CONTROL SYSTEMS			TYPICAL EQUIPMENT APPLICATION			
ι	Direct Diesel Injection, To	urbocharger	Loader and 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	EMISSION		EXHAUST (g/kw-hr)				OPACITY (%)			
POWER CLASS	STANDARD		HC	NOx	NMHC+NOx	co	PM	ACCEL	LUG	PEAK
37 <u><</u> KW<75	Tier 2	STD	N/A	N/A	7.5	5.0	0.40	20	15	50
		CERT			5.6	3.9	0.22	13	10	26

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 November 2006.

Annette Hebert, Chief

Mobile Source Operations Division

Engine Model Summary Form

ATTAGMENT 1 OF 1

Manufacturer: MAHINDRA & MAHINDRA LTD.,

Engine category: Nonroad CI

EPA Engine Family. 7MMLL03.2NET

Mfr Family Name: NEW ENGINE FAMILY

Process Code: New Submission

4.643-0036

8.Fuel Rate: 9.Emission Control (lbs/hr)@peak torque Device Per SAE J1930	005, ## TC 005, ## TC
8.Fuel Rate: (lbs/hr)@peak torque	22.64 22.64
7.Fuel Rate: mm/stroke@peak torque	73.20 73.20
6.Torque @ RPM (SEA Gross)	291.26N.m@140 291.26N.m@140
5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only)	29.36 29.36
4.Fuel Rate: mm/stroke @ peak HP (for diesel only)	57.80 57.80
3.BHP@RPM (SAE Gross)	73.35@2300 73.35@2300
1.Engine Code 2.Engine Model	NE475R 2wd NE475R 4wd
1.Engine Code	Y Z Z Z