

MAHINDRA & MAHINDRA LTD.

EXECUTIVE ORDER U-R-043-0043 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 L (hours)			
2008	8MMLL02.5N64	2.497	Diesel	8000		
SPECIAL FEATURES & EMISSION CONTROL SYSTEMS			TYPICAL EQUIPMENT APPLICATION			
Direct Dies Engine (sel Injection, Turbocharge Control Module, Exhaus	er, Charge Air Cooler, t Gas Recirculation	Loader, 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 STANDARD CATEGORY		EXHAUST (g/kw-hr) OPACITY (%)						6)	
POWER CLASS			нс	NOx	NMHC+NOx	co	PM	ACCEL	LUG	PEAK
37 <u>≤</u> KW<75	Tier 3	STD	N/A	N/A	4.7	5.0	0.40	20	15	50
		CERT			4.0	1.5	0.15	4	4	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.

Annette Hebert, Chief

Mobile Source Operations Division

ATTACHMENT 10F1

Engine Model Summary Form

MAHINDRA & MAHINDRA LTD., Manufacturer:

Nonroad Cl Engine category: EPA Engine Family: 8MMLL02.5N64

Mfr Family Name: MAHINDRA & MAHINDRA

U-R-043043

Process Code:

New Submission

8.Fuel Rate: 9.Emission Control (lbs/hr)@peak torque Device Per SAE J1930	17.57@1400 PDE,TCNA CA C. 17.57@1400 ti NA !!
7.Fuel Rate: mm/stroke@peak forque	75.75 @1400 75.75@1400
6.Torque @ RPM (SEA Gross)	246 N.m@1400 246 N.m@1400
5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only)	25.13@2200 25.13@2200
4.Fuel Rate: mm/stroke @ peak HP (for diesel only)	68.95@2200 68.95@2200
3.BHP@RPM (SAE Gross)	65.03@2200 65.03@2200
1.Engine Code 2.Engine Model	NE364 2wd NE364 4wd
1.Engine Code	N A A