Mahindra & Mahindra LTD.

EXECUTIVE ORDER U-R-043-0006

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.

DEL ENGINE FAMILY DISPLACEMENT (liters)		FUEL TYPE	USEFUL LIFE (hours)		
3MMLL03.5NEF	3.532	Diesel	8000		
		TYPICAL EQUIPMENT APPLICATION			
Direct Diesel Injec	tion	Tractor			
	3MMLL03.5NEF	3MMLL03.5NEF 3.532	3MMLL03.5NEF 3.532 Diesel FEATURES & EMISSION CONTROL SYSTEMS TYPICAL EQUIPMENT A		

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				EXHAUST (g/kw-hr)				OPACITY (%)		
CLASS	CATEGORY		HC	NOx	NMHC+NO _X	CO	PM	ACCEL	LUG	PEAK
37 <u><</u> KW<75	Tier 1	STD	N/A	9.2	N/A	N/A	N/A	20	15	50
		CERT	-	7.1				3	4	4

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 April 2003.

Allen Lyons, Chief

Mobile Source Operations Division

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Manufacturer: MAHINDRA & MAHINDRA LTD.,

Engine category: Nonroad Cl
EPA Engine Family: 3MMLL03.5NEF

Mir Family Name: MAHINDRA & MAHINDRA

New Submission Process Code:

WR-043-0006

	1
8.Fuel Rate: 9.Emission Control (lbs/hr)@peak torque Device Per SAE J1930	NE465.2wd 64.2@2200 48.39@2200 23.51@2200 182@1325 56.49@1325 16.53@1325
8.Fuel Rate: (lbs/hr)@peak torqu	16.53@1325 16.53@1325
7.Fuel Rate: mm/stroke@peak torque	56.49@1325 56.49@1325
6.Torque @ RPM (SEA Gross)	182@1325 182@1325
5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only)	23.51@2200 23.51@2200
4.Fuel Rate: 5.Fuel Rate: mm/stroke @ peak HP (lbs/hr) @ peak HP (for diesels only)	NE465 2wd 64.2@2200 48.39@2200 23.51@2200 182@1325 NE465 4wd 64.2@2200 48.39@2200 23.51@2200 182@1325
3.BHP@RPM (SAE Gross)	64.2@2200 64.2@2200
1.Engine Code 2.Engine Model	NE465 2wd NE465 4wd
1.Engine Code	NA NA