

MAHINDRA & MAHINDRA LTD.

EXECUTIVE ORDER U-R-043-0055 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)
2009	9MMLL03.3N79	3.330	Diesel	8000
SPECIAL	FEATURES & EMISSION	CONTROL SYSTEMS	TYPICAL EQUIPMENT	APPLICATION
Direct Dies Engine	sel Injection, Turbocharg Control Module, Exhaus	er, Charge Air Cooler, t Gas Recirculation	Loader, Trac	etor

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			E	XHAUST (g/kw-l	1 r)		OF	PACITY (%	o)
POWER	STANDARD CATEGORY		HC	NOx	NMHC+NO _X	co	PM	ACCEL	LUG	PEAK
56 <u><</u> KW<75	Tier 3	STD	N/A	N/A	4.7	5.0	0.40	20	15	50
		CERT			3.9	0.8	0.15	3	5	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 December 2008.

Annette Hebert, Chief

Mobile Source Operations Division

Engine Model Summary Form

MAHINDRA & MAHINDRA LTD., ATTACHMENT 1 CF. 1 Engine category:

Nonroad Ci 9MMLL03.3N79 NEW ENGINE FAMILY New Submission EPA Engine Family. Mfr Family Name: Process Code:

1.Engine Code	2.Engine Model	3.BHP@RPM (SAE Gross)	4-Fuel Rate: mm/stroke @ peak HP (lb (for diesel only) (f	5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only)	6.Torque @ RPM (SEA Gross)	7.Fuel Rate: mm/stroke@peak torque	8.Fuel Rate: 9.Emission Control (Ibs/hr)@peak torque Device Per SAE J1930
A A	NE479 2wd	80.35@2300	60.49@2300	30.73@2300	314N.m@1400	71.29@1400	22.05@140075PPT, CACNA, ECP, EGR.
	NE479 4wd	80.35@2300	60.49@2300	30.73@2300	314N.m@1400	71.29@1400	22.05@1400pc, DOD, CAC NA, ECM, EGR.

12-643-6655