

State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER U-R-34-5
Relating to Certification of New Off-Road Compression-Ignition Engines

MOTORENFABRIK HATZ GMBH & CO. KG

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-45-9;

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:

Model Year: 2001

Typical Equipment Usage: Generator set and compressor

Fuel Type: Diesel

	Engine		
<u>Engine Family</u>	Displacement (liters)	Useful Life (hours)	Emission Control Systems and Special Features
1HZXL3.43A37	2.574 and 3.432	8000	Direct Diesel Injection

Engine models and codes are listed on attachments. Production engines shall be in all material respects the same as those for which certification is granted.

The exhaust emission certification standards and certification values for hydrocarbons (HC), oxides of nitrogen (NOx), or non-methane hydrocarbons plus oxides of nitrogen (NMHC+NOx), carbon monoxide (CO), and particulate matter (PM) (units are expressed in grams per kilowatt-hour (g/kw-hr)), and the opacity-of-smoke certification standards and certification values in percent (%) during acceleration (Accel), lugging (Lug), and the peak value from either mode (Peak) for this engine family are as follows (Title 13, California Code of Regulations, Section 2423):

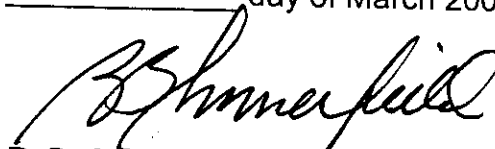
Engine Power Rating (kw)	Emission Standard Category		Exhaust Emissions (g/kw-hr)					Smoke Opacity (%)		
			HC	NOx	NMHC+NOx	CO	PM	Accel	Lug	Peak
37≤KW<75	Tier 1	Standard	N/A	9.2	N/A	N/A	N/A	20	15	50
		Certification	--	8.4	--	--	--	9	12	10

BE IT FURTHER RESOLVED: That the listed engine models also comply with "Emission Control Labels— 1996 and Later Off-Road Compression-Ignition Engines" (Title 13, California Code of Regulations, Section 2424) for the aforementioned model-year.

BE IT FURTHER RESOLVED: That for the listed engine models, the manufacturer has submitted the materials to demonstrate certification compliance with the Board's emission control system warranty provisions (Title 13, California Code of Regulations, Sections 2425 and 2426).

Engines certified under this Executive Order must conform to all applicable California emission regulations.

Executed at El Monte, California this 5th day of March 2001.



R. B. Summerfield, Chief
Mobile Source Operations Division

Model Year: 2001
 Manufacturer: Motorenfabrik Hatz GmbH & Co. KG
 Engine Family: 1HZXL3.43A37

Issued:
 Revised: 11/29/2000
 E.O. Number:

ED# U-R-34-5

Small Off-Road Engine Model Summary Form

Attachment

Units for Table: hp

Worst Case?	47. Model Designation	48. Sales Code	49. Displ (cc)	50. Bore/ Stroke	51. Ignition Timing	52. Max Power	53. Rated Speed (RPM)	54. Rated Torque	55. Torque Speed (RPM)	56. Emiss Control Sys
	4M41	Calif. Only	3432	102 / 105	10+1° static	71.2	3000	125	3000	DDI EM
	4M41	Calif. Only	3432	102 / 105	10+1° static	64.0	3000	112	3000	DDI EM
	4M41Z	Calif. Only	3432	102 / 105	10+1° static	69.1	3000	123	3000	DDI EM
	4M41Z	Calif. Only	3432	102 / 105	10+1° static	62.0	3000	110	3000	DDI EM
	4L41C	Calif. Only	3432	102 / 105	10+1° static	65.4	3000	115	3000	DDI EM
	4L41C	Calif. Only	3432	102 / 105	10+1° static	58.9	3000	104	3000	DDI EM
	4M41	Calif. Only	3432	102 / 105	10+1° static	69.7	2300	160	2300	DDI EM
	4M41	Calif. Only	3432	102 / 105	10+1° static	62.7	2300	144	2300	DDI EM
	4M41Z	Calif. Only	3432	102 / 105	10+1° static	68.3	2300	158	2300	DDI EM
	4M41Z	Calif. Only	3432	102 / 105	10+1° static	61.4	2300	142	2300	DDI EM
	4L41C	Calif. Only	3432	102 / 105	10+1° static	63.0	2300	144	2300	DDI EM
	4L41C	Calif. Only	3432	102 / 105	10+1° static	56.7	2300	130	2300	DDI EM
	4M41	Calif. Only	3432	102 / 105	10+1° static	49.6	1800	149	1800	DDI EM
	3M41	Calif. Only	2574	102 / 105	10+1° static	53.3	3000	94	3000	DDI EM
	3M41Z	Calif. Only	2574	102 / 105	10+1° static	52.4	3000	92	3000	DDI EM
	3M41	Calif. Only	2574	102 / 105	10+1° static	52.1	2300	112	2300	DDI EM
X	3M41Z	Calif. Only	2574	102 / 105	10+1° static	51.2	2300	110	2300	DDI EM

EPA cert. NO. HZX-NRCI-01-01