

State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER U-R-34-10
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: Constant-speed pump, generator and compressor

Fuel Type: Diesel

<u>Engine Family</u>	<u>Engine Displacement (liters)</u>	<u>Useful Life (hours)</u>	<u>Emission Control Systems and Special Features</u>
1HZXL997V40	0.997	3000	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 (NO_x), or non-methane hydrocarbons plus oxides of nitrogen (NMHC+NO_x), 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):

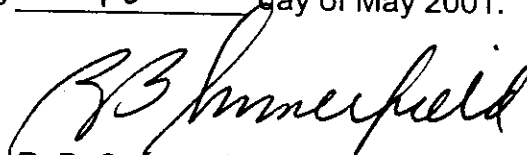
<u>Engine Power Rating (kw)</u>	<u>Emission Standard Category</u>		<u>Exhaust Emissions (g/kw-hr)</u>					<u>Smoke Opacity (%)</u>		
			<u>HC</u>	<u>NO_x</u>	<u>NMHC+NO_x</u>	<u>CO</u>	<u>PM</u>	<u>Accel</u>	<u>Lug</u>	<u>Peak</u>
8≤KW<19	Tier 1	Standard	N/A	N/A	9.5	6.6	0.80	N/A	N/A	N/A
		Certification	--	--	8.2	4.0	0.54	--	--	--

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 10th day of May 2001.



R. B. Summerfield, Chief
Mobile Source Operations Division

Small Off-Road Engine Model Summary Form

Units for Table: kw

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
	2G40/2G40H	Calif. Only	997	92/75	13	22.8	3600	41.4	3600	DDI
	2G40/2G40H	Calif. Only	997	92/75	13	22.8	3550	41.4	3550	DDI
	2G40/2G40H	Calif. Only	997	92/75	13	22.8	3500	41.4	3500	DDI
	2G40/2G40H	Calif. Only	997	92/75	13	22.6	3450	41.4	3450	DDI
	2G40/2G40H	Calif. Only	997	92/75	13	22.6	3400	41.4	3400	DDI
	2G40/2G40H	Calif. Only	997	92/75	13	22.6	3350	41.4	3350	DDI
	2G40/2G40H	Calif. Only	997	92/75	13	22.5	3300	41.4	3300	DDI
	2G40/2G40H	Calif. Only	997	92/75	13	22.4	3250	41.4	3250	DDI
	2G40/2G40H	Calif. Only	997	92/75	13	22.2	3200	41.4	3200	DDI
	2G40/2G40H	Calif. Only	997	92/75	13	22.1	3150	41.4	3150	DDI
	2G40/2G40H	Calif. Only	997	92/75	13	22.0	3100	41.4	3100	DDI
	2G40/2G40H	Calif. Only	997	92/75	13	21.8	3050	41.4	3050	DDI
X	2G40/2G40H	Calif. Only	997	92/75	10	21.7	3000	41.4	3000	DDI

Additional engine model info. please see record 2 !

[52.=hp]

[41.4]

Model Year:
Manufacturer:
Engine Family:

Issued:
Revised: 3/16/2001
E.O. Number:

U-R-34-10

Small Off-Road Engine Model Summary Form

Units for Table:

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
	2G40/2G40H	Calif. Only	997	92/75	13	20.9	3600	37.0	3600	DDI
	2G40/2G40H	Calif. Only	997	92/75	13	20.9	3550	37.0	3550	DDI
	2G40/2G40H	Calif. Only	997	92/75	13	20.8	3500	37.0	3500	DDI
	2G40/2G40H	Calif. Only	997	92/75	13	20.8	3450	37.0	3450	DDI
	2G40/2G40H	Calif. Only	997	92/75	13	20.6	3400	37.0	3400	DDI
	2G40/2G40H	Calif. Only	997	92/75	13	20.6	3350	37.0	3350	DDI
	2G40/2G40H	Calif. Only	997	92/75	13	20.5	3300	37.0	3300	DDI
	2G40/2G40H	Calif. Only	997	92/75	13	20.4	3250	37.0	3250	DDI
	2G40/2G40H	Calif. Only	997	92/75	13	20.2	3200	37.0	3200	DDI
	2G40/2G40H	Calif. Only	997	92/75	13	20.1	3150	37.0	3150	DDI
	2G40/2G40H	Calif. Only	997	92/75	13	20.0	3100	37.0	3100	DDI
	2G40/2G40H	Calif. Only	997	92/75	13	19.8	3050	37.0	3050	DDI
	2G40/2G40H	Calif. Only	997	92/75	10	19.7	3000	37.0	3000	DDI

[52.=hp]

[lbft]