

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 engines and emission control systems 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	9HZXL280C27	0.280	Diesel	3000
SPECIAL FEATURES & EMISSION CONTROL SYSTEMS			TYPICAL EQUIPMENT APPLICATION	
Direct Diesel Injection			Pump, Generator Set	

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 CLASS	EMISSION STANDARD CATEGORY		EXHAUST (g/kw-hr)					OPACITY (%)		
			HC	NOx	NMHC+NOx	CO	PM	ACCEL	LUG	PEAK
kW < 8	Tier 4	STD	--	--	7.5	8.0	0.80	N/A	N/A	N/A
		CERT	--	--	6.4	3.9	0.31	--	--	--

BE IT FURTHER RESOLVED: That certification to the standards in 13 CCR 2423(b)(1)(A) -Table 1b listed above has been permitted pursuant to Endnote 2 of the same table.

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 5 day of November 2008.



Annette Hebert, Chief
 Mobile Source Operations Division

Motorenfabrik Hatz
 Nonroad CI
 9HZXL280C27

Attachment

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Engine Model Summary Template

Engine Family	1 Engine Code	2 Engine Model	3 BHP@RPM (SAE Gross)	4 Fuel Rate: mm ³ /hr @ peak HP (Or diesel only)	5 Fuel Rate: (brake @ peak HP (Or diesel & oil))	6 Torque @ RPM (SAE Gross)	7 Fuel Rate: mm ³ /hr @ peak brake	8 Fuel Rate: (brake) @ peak brake Per SAE J1830	9 Emission Control Denote Per SAE J1830
9HZXL280C27	N/A	1B27	5.4@3600	13.0	2.6	7.9@3600	13.0	2.6	DDI
9HZXL280C27	N/A	1B27	5.4@3650	13.0	2.6	8.0@3650	13.0	2.6	
9HZXL280C27	N/A	1B27	5.2@3500	13.0	2.5	7.9@3500	13.0	2.5	
9HZXL280C27	N/A	1B27	5.2@3460	13.0	2.5	8.0@3460	13.0	2.5	
9HZXL280C27	N/A	1B27	5.2@3400	13.0	2.5	8.1@3400	13.0	2.5	
9HZXL280C27	N/A	1B27	5.1@3350	13.0	2.4	8.0@3350	13.0	2.4	
9HZXL280C27	N/A	1B27	5.1@3300	13.0	2.4	8.1@3300	13.0	2.4	
9HZXL280C27	N/A	1B27	5.1@3250	13.0	2.4	8.3@3250	13.0	2.4	
9HZXL280C27	N/A	1B27	5.1@3200	13.0	2.3	8.4@3200	13.0	2.3	
9HZXL280C27	N/A	1B27	5.0@3150	13.0	2.3	8.3@3150	13.0	2.3	
9HZXL280C27	N/A	1B27	5.0@3100	13.0	2.2	8.4@3100	13.0	2.2	
9HZXL280C27	N/A	1B27	5.0@3050	13.0	2.2	8.6@3050	13.0	2.2	
9HZXL280C27	N/A	1B27	5.0@3000	13.3	2.2	8.7@3000	13.3	2.2	
9HZXL280C27	N/A	1B27	5.0@2950	13.3	2.2	8.9@2950	13.3	2.2	
9HZXL280C27	N/A	1B27	4.8@2900	13.3	2.2	8.8@2900	13.3	2.2	
9HZXL280C27	N/A	1B27	4.8@2850	13.3	2.1	8.9@2850	13.3	2.1	
9HZXL280C27	N/A	1B27	4.8@2800	13.3	2.1	9.1@2800	13.3	2.1	
9HZXL280C27	N/A	1B27	4.8@2750	13.3	2.0	9.3@2750	13.3	2.0	
9HZXL280C27	N/A	1B27	4.7@2700	13.3	2.0	9.2@2700	13.3	2.0	
9HZXL280C27	N/A	1B27	4.6@2650	13.3	2.0	9.1@2650	13.3	2.0	
9HZXL280C27	N/A	1B27	4.6@2600	13.3	1.9	9.2@2600	13.3	1.9	
9HZXL280C27	N/A	1B27	4.6@2550	13.3	1.9	9.4@2550	13.3	1.9	
9HZXL280C27	N/A	1B27	4.4@2500	13.3	1.9	9.3@2500	13.3	1.9	
9HZXL280C27	N/A	1B27	4.3@2450	13.3	1.8	9.2@2450	13.3	1.8	
9HZXL280C27	N/A	1B27	4.2@2400	13.3	1.8	9.1@2400	13.3	1.8	
9HZXL280C27	N/A	1B27	4.2@2350	13.3	1.7	9.3@2350	13.3	1.7	
9HZXL280C27	N/A	1B27	4.0@2300	13.3	1.7	9.2@2300	13.3	1.7	

Motorenfabrik Hatz
 Nonroad CI
 9HZXL280C27

Attachment

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Engine Model Summary Template

Engine Family	1.Engine Code	2.Engine Model	3.BHP@RPM (SAE Gross)	4.Fuel Rate: mm ³ /hr @ peak HP (Or diesel O/W)	5.Fuel Rate: (Peak) @ peak HP (Or diesel O/W)	6.Torque @ RPM (SAE Gross)	7.Fuel Rate: mm ³ /hr @ peak torque	8.Fuel Rate: (Or A) @ peak torque	9.Brake In Control Deviate Per SAE J1930
9HZXL280C27	N/A	1B27	4.0@2250	13.3	1.7	9.4@2250	13.3	1.7	DDI
9HZXL280C27	N/A	1B27	3.9@2200	13.3	1.6	9.3@2200	13.3	1.6	
9HZXL280C27	N/A	1B27	3.8@2150	13.3	1.6	9.2@2150	13.3	1.6	
9HZXL280C27	N/A	1B27	3.9@2100	13.3	1.6	9.1@2100	13.3	1.6	
9HZXL280C27	N/A	1B27	3.5@2050	13.3	1.5	9.0@2050	13.3	1.5	
9HZXL280C27	N/A	1B27	3.4@2000	13.3	1.5	8.8@2000	13.3	1.5	
9HZXL280C27	N/A	1B27	3.2@1950	13.3	1.4	8.7@1950	13.3	1.4	
9HZXL280C27	N/A	1B27	3.1@1900	13.3	1.4	8.6@1900	13.3	1.4	
9HZXL280C27	N/A	1B27	2.9@1850	13.3	1.4	8.4@1850	13.3	1.4	
9HZXL280C27	N/A	1B27	2.9@1800	13.3	1.3	8.6@1800	13.3	1.3	