



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)
2010	AHZXL243C20	0.243	Diesel	3000
SPECIAL FEATURES & EMISSION CONTROL SYSTEMS			TYPICAL EQUIPMENT APPLICATION	
Mechanical Direct 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	0.60	N/A	N/A	N/A
		CERT	--	--	6.9	5.5	0.45	--	--	--

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 29 day of December 2009.

Annette Hebert, Chief
Mobile Source Operations Division

Motorenfabrik Hatz

Nonroad CI

Attachment

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U-R-034-0211

12/14/2009

Engine Model Summary Template

Engine Family	1.Engine Code	2.Engine Model	3.HP@RPM (SAE Gross)	4.Fuel Rate: max@max RPM (lb/dish@101)	5.Fuel Rate: (max) @ peak HP (or class @ 101)	6.Torque @ RPM (SAE Gross)	7.Fuel Rate: max@max@peak torque	8.Fuel Rate: (max) @ peak torque (or class @ 101)	9.Emissions Control Device Per SAE J1930
AHZXL243C20	N/A	1B20/1B20R	4.5@3600	11	2.2	6.7@3600	11	2.2	Mechanical DI
AHZXL243C20	N/A	1B20/1B20R	4.6@3650	11	2.2	6.8@3650	11	2.2	
AHZXL243C20	N/A	1B20/1B20R	4.5@3600	11	2.1	6.9@3600	11	2.1	
AHZXL243C20	N/A	1B20/1B20R	4.5@3460	11	2.1	7.0@3460	11	2.1	
AHZXL243C20	N/A	1B20/1B20R	4.5@3400	11	2.1	6.9@3400	11	2.1	
AHZXL243C20	N/A	1B20/1B20R	4.4@3360	11	2.1	7.0@3360	11	2.1	
AHZXL243C20	N/A	1B20/1B20R	4.4@3300	11	2.0	7.1@3300	11	2.0	
AHZXL243C20	N/A	1B20/1B20R	4.3@3260	11	2.0	7.2@3260	11	2.0	
AHZXL243C20	N/A	1B20/1B20R	4.3@3200	11	2.0	7.1@3200	11	2.0	
AHZXL243C20	N/A	1B20/1B20R	4.3@3160	11	1.9	7.2@3160	11	1.9	
AHZXL243C20	N/A	1B20/1B20R	4.3@3100	11	1.9	7.2@3100	11	1.9	
AHZXL243C20	N/A	1B20/1B20R	4.2@3060	11	1.9	7.3@3060	11	1.9	
AHZXL243C20	N/A	1B20/1B20R	4.2@3000	11.5	1.9	7.3@3000	11.5	1.9	
AHZXL243C20	N/A	1B20/1B20R	4.1@2960	11.5	1.9	7.3@2960	11.5	1.9	
AHZXL243C20	N/A	1B20/1B20R	4.0@2900	11.5	1.9	7.3@2900	11.5	1.9	
AHZXL243C20	N/A	1B20/1B20R	3.9@2860	11.5	1.8	7.3@2860	11.5	1.8	
AHZXL243C20	N/A	1B20/1B20R	3.9@2800	11.5	1.8	7.4@2800	11.5	1.8	
AHZXL243C20	N/A	1B20/1B20R	3.9@2760	11.5	1.8	7.5@2760	11.5	1.8	
AHZXL243C20	N/A	1B20/1B20R	3.9@2700	11.5	1.7	7.5@2700	11.5	1.7	
AHZXL243C20	N/A	1B20/1B20R	3.8@2660	11.5	1.7	7.6@2660	11.5	1.7	
AHZXL243C20	N/A	1B20/1B20R	3.8@2600	11.5	1.7	7.6@2600	11.5	1.7	
AHZXL243C20	N/A	1B20/1B20R	3.8@2560	11.5	1.6	7.8@2560	11.5	1.6	
AHZXL243C20	N/A	1B20/1B20R	3.7@2500	11.5	1.6	7.7@2500	11.5	1.6	
AHZXL243C20	N/A	1B20/1B20R	3.6@2460	11.5	1.6	7.8@2460	11.5	1.6	
AHZXL243C20	N/A	1B20/1B20R	3.5@2400	11.5	1.5	7.8@2400	11.5	1.5	
AHZXL243C20	N/A	1B20/1B20R	3.5@2360	11.5	1.5	7.8@2360	11.5	1.5	

Motorenfabrik Hatz

Nonroad CI

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U-R-034-0211

12/14/2009

Engine Model Summary Template

Engine Family	1.Engine Code	2.Engine Model	3.HH@RPM (SAE Gross)	4.Fuel Rate: max torque @ peak HP (% of base only)	5.Fuel Rate: (% of peak HP (% of base only)	6.Torque @ RPM (SAE Gross)	7.Fuel Rate: max torque @ peak torque	8.Fuel Rate: (% of peak torque (% of SAE J133D)	9.Emits for Control Device Per SAE J133D
AHZXL243C20	N/A	1B20/1B20R	3.4@2300	11.5	1.5	7.8@2300	11.5	1.5	Mechanical DI
AHZXL243C20	N/A	1B20/1B20R	3.3@2250	11.5	1.4	7.8@2250	11.5	1.4	
AHZXL243C20	N/A	1B20/1B20R	3.2@2200	11.5	1.4	7.7@2200	11.5	1.4	
AHZXL243C20	N/A	1B20/1B20R	3.1@2150	11.5	1.4	7.6@2150	11.5	1.4	
AHZXL243C20	N/A	1B20/1B20R	2.9@2100	11.5	1.3	7.4@2100	11.5	1.3	
AHZXL243C20	N/A	1B20/1B20R	2.8@2050	11.5	1.3	7.2@2050	11.5	1.3	
AHZXL243C20	N/A	1B20/1B20R	2.8@2000	11.5	1.3	7.3@2000	11.5	1.3	