

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)
2008	8HZXL1.38TV2	1.384	Diesel	5000
SPECIAL FEATURES & EMISSION CONTROL SYSTEMS			TYPICAL EQUIPMENT APPLICATION	
Direct Diesel Injection, Turbocharger			Pump, Other Industrial Equipment	

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
19 ≤ kW < 37	Tier 4 interim	STD	N/A	N/A	7.5	5.5	0.30	20	15	50
		CERT	--	--	7.0	2.6	0.24	3	2	5

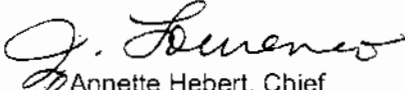
BE IT FURTHER RESOLVED: That for the listed engine models, the manufacturer has submitted the information and materials to demonstrate certification compliance with 13 CCR Section 2424 (emission control labels), and 13 CCR Sections 2425 and 2426 (emission control system warranty).

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.

This Executive Order hereby cancels and replaces Executive Order U-R-034-0180 dated March 20, 2008.

Executed at El Monte, California on this 12th day of December 2008.


 Annette Hebert, Chief
 Mobile Source Operations Division

Motorenfabrik Hatz
 Nonroad CI

Attachment

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Engine Model Summary Template

Engine Family	1 Engine Code	2 Engine Model	3 Max Power kW @ 1500 min @ 1500	4 Fuel Rate mg/kWh @ 1500 min @ 1500		5 Fuel Rate mg/kWh @ 1800 min @ 1800		6 Max G RPM @ 1800		7 Fuel Rate mg/kWh @ 1800 min @ 1800		8 Fuel Rate mg/kWh @ 2000 min @ 2000		9 Emission Control Technology Pilot Scale P/SAC P/SBO
				20.5	21.5	20.5	21.5	5.5	5.5	8000	8000	20.5	20.5	
SHZAL18TV2	NA	4W35T-2-4	41.0@1500	20.5	5.5	20.5	5.5	8000	8000	20.5	5.5	20.5	5.5	3.8
SHZAL18TV2	NA	4W35T	39.0@2000	20.5	5.3	20.5	5.3	9000	9000	20.5	5.3	20.5	5.3	4.3
SHZAL18TV2	NA	4W35T	37.0@2000	20.5	5.2	20.5	5.2	8700	8800	20.0	5.0	20.0	5.0	3.7
SHZAL18TV2	NA	4W35T	36.0@2000	20.5	5.1	20.5	5.1	8700	8800	20.0	5.0	20.0	5.0	3.7
SHZAL18TV2	NA	4W35T	35.0@2000	20.5	5.0	20.5	5.0	8700	8800	20.0	5.0	20.0	5.0	3.7
SHZAL18TV2	NA	4W35T	35.0@2000	20.5	5.0	20.5	5.0	8700	8800	20.0	5.0	20.0	5.0	3.7
SHZAL18TV2	NA	4W35T	35.0@2000	20.5	4.9	20.5	4.9	8600	8800	20.0	4.9	20.0	4.9	3.6
SHZAL18TV2	NA	4W35T	35.0@2000	20.5	4.8	20.5	4.8	8400	8500	20.0	4.8	20.0	4.8	3.5
SHZAL18TV2	NA	4W35T	35.0@2000	20.5	4.7	20.5	4.7	8100	8200	20.0	4.7	20.0	4.7	3.4
SHZAL18TV2	NA	4W35T	34.0@2000	20.5	4.5	20.5	4.5	8000	8000	20.0	4.5	20.0	4.5	3.4
SHZAL18TV2	NA	4W35T	33.0@2500	20.5	4.4	20.5	4.4	7800	8000	20.0	4.4	20.0	4.4	3.3
SHZAL18TV2	NA	4W35T	33.0@2500	20.5	4.3	20.5	4.3	7700	8000	20.0	4.3	20.0	4.3	3.3

DPI, IC

