California Environmental Protection Agency AIR RESOURCES BOARD	MOTORENFABRIK HATZ	EXECUTIVE ORDER U-R-034-0256 New Off-Road Compression-Ignition Engines

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)
2011	BHZXL.722C90	0.722	Diesel	3000

SPECIAL FEATURES & EMISSION CONTROL SYSTEMS	TYPICAL EQUIPMENT APPLICATION
Mechanical Direct Injection	Pump, Generator Set, 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
8 ≤ kW < 19	Tier 4 - Final	STD	N/A	N/A	7.5	6.6	0.40	N/A	N/A	N/A
		CERT	--	--	7.3	4.6	0.20	--	--	--

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 Sections 2425 and 2426 (emission control system warranty).

BE IT FURTHER RESOLVED: The listed engine models are conditionally certified pending submission of new emission control labels to comply with 13 CCR Section 2424 (emission control labels). The manufacturer has until May 16, 2011 to replace all existing MY2011 emission control labels to remove this conditional certification. Failure to resolve concerns by the specified date, shall be cause for the Executive Officer to rescind this conditional certification, in which case all engines covered under this conditional certification would be deemed uncertified and subject to civil penalties pursuant to Health and Safety Code Section 43154.

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 24th day of February 2011.

Annette Hebert, Chief
Mobile Source Operations Division

SUPERSEDED

Motorenfabrik Hatz
Nonroad CI

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: mm³/stroke @ peak HP (for diesel only)	5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only)	6.Torque @ RPM (SEA Gross)	7.Fuel Rate: mm³/stroke@peak torque	8.Fuel Rate: (lbs/hr)@peak torque	9.Emissions Control Device Per SAEJ
BHZXL.722C90	N/A	1D90 S/Z/V/W	14,7@3000	41,5	6,9	25,9@3000	41,5	6,9	Mechanical DI
BHZXL.722C90	N/A	1D90 S/Z/V/W	14,6@2950	41,5	6,8	14,6@2950	41,5	6,8	
BHZXL.722C90	N/A	1D90 S/Z/V/W	14,5@2900	41,5	6,7	14,6@2900	41,5	6,7	
BHZXL.722C90	N/A	1D90 S/Z/V/W	14,3@2850	41,5	6,6	14,6@2850	41,5	6,6	
BHZXL.722C90	N/A	1D90 S/Z/V/W	14,2@2800	41,5	6,5	14,6@2800	41,5	6,5	
BHZXL.722C90	N/A	1D90 S/Z/V/W	14,1@2750	41,5	6,4	14,6@2750	41,5	6,4	
BHZXL.722C90	N/A	1D90 S/Z/V/W	13,9@2700	41,5	6,2	14,6@2700	41,5	6,2	
BHZXL.722C90	N/A	1D90 S/Z/V/W	13,7@2650	41,5	6,1	14,6@2650	41,5	6,1	
BHZXL.722C90	N/A	1D90 S/Z/V/W	13,5@2600	41,5	6,0	14,6@2600	41,5	6,0	
BHZXL.722C90	N/A	1D90 S/Z/V/W	13,4@2550	41,5	5,9	14,6@2550	41,5	5,9	
BHZXL.722C90	N/A	1D90 S/Z/V/W	13,1@2500	41,5	5,8	14,6@2500	41,5	5,8	
BHZXL.722C90	N/A	1D90 S/Z/V/W	13,0@2450	41,5	5,7	14,6@2450	41,5	5,7	
BHZXL.722C90	N/A	1D90 S/Z/V/W	12,7@2400	41,5	5,6	14,6@2400	41,5	5,6	
BHZXL.722C90	N/A	1D90 S/Z/V/W	12,6@2350	41,5	5,4	14,6@2350	41,5	5,4	
BHZXL.722C90	N/A	1D90 S/Z/V/W	12,3@2300	41,5	5,3	14,6@2300	41,5	5,3	
BHZXL.722C90	N/A	1D90 S/Z/V/W	12,1@2250	41,5	5,2	14,6@2250	41,5	5,2	
BHZXL.722C90	N/A	1D90 S/Z/V/W	11,9@2200	41,5	5,1	14,6@2200	41,5	5,1	
BHZXL.722C90	N/A	1D90 S/Z/V/W	11,7@2150	41,5	5,0	14,6@2150	41,5	5,0	
BHZXL.722C90	N/A	1D90 S/Z/V/W	11,4@2100	41,5	4,9	14,6@2100	41,5	4,9	
BHZXL.722C90	N/A	1D90 S/Z/V/W	11,1@2050	41,5	4,7	14,6@2050	41,5	4,7	
BHZXL.722C90	N/A	1D90 S/Z/V/W	10,9@2000	41,5	4,6	14,6@2000	41,5	4,6	

SUPERSEDED