California Environmental Protection Agency AIR RESOURCES BOARD	MOTORENFABRIK HATZ	EXECUTIVE ORDER U-R-034-0258 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.997C40	0.997	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	--	--	7.2	3.4	0.21	--	--	--

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 17th day of February 2011.

J. Lourenco

Annette Hebert, Chief
Mobile Source Operations Division

Motorenfabrik Hatz

Nonroad CI

Attachment

EO# U-R-034-0258

2/1/2011

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 diesels only)	5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only)	6.Torque @ RPM (SAE Gross)	7.Fuel Rate: mm3/stroke@peak torque	8.Fuel Rate: (lbs/hr)@peak torque	9.Emission Control Device Per SAE J1930
BHZXL.997C40	N/A	2G40 / 2G40H	21,7@3000	26	4,3	38,2@3000	26	4,3	Mechanical DI
BHZXL.997C40	N/A	2G40 / 2G40H	21,4@2950	26	4,3	38,3@2950	26	4,3	
BHZXL.997C40	N/A	2G40 / 2G40H	21,2@2900	26	4,2	38,5@2900	26	4,2	
BHZXL.997C40	N/A	2G40 / 2G40H	20,9@2850	26	4,1	38,7@2850	26	4,1	
BHZXL.997C40	N/A	2G40 / 2G40H	20,6@2800	26	4,1	38,9@2800	26	4,1	
BHZXL.997C40	N/A	2G40 / 2G40H	20,4@2750	26	4,0	39,1@2750	26	4,0	
BHZXL.997C40	N/A	2G40 / 2G40H	20,1@2700	26	3,9	39,3@2700	26	3,9	
BHZXL.997C40	N/A	2G40 / 2G40H	19,8@2650	26	3,8	39,5@2650	26	3,8	
BHZXL.997C40	N/A	2G40 / 2G40H	19,6@2600	26	3,8	39,7@2600	26	3,8	
BHZXL.997C40	N/A	2G40 / 2G40H	20,8@3000	25	4,2	36,5@3000	25	4,2	
BHZXL.997C40	N/A	2G40 / 2G40H	20,5@2950	25	4,1	36,6@2950	25	4,1	
BHZXL.997C40	N/A	2G40 / 2G40H	20,2@2900	25	4,0	36,8@2900	25	4,0	
BHZXL.997C40	N/A	2G40 / 2G40H	20,0@2850	25	4,0	36,9@2850	25	4,0	
BHZXL.997C40	N/A	2G40 / 2G40H	19,7@2800	25	3,9	37,1@2800	25	3,9	
BHZXL.997C40	N/A	2G40 / 2G40H	19,4@2750	25	3,8	37,3@2750	25	3,8	
BHZXL.997C40	N/A	2G40 / 2G40H	19,2@2700	25	3,8	37,4@2700	25	3,8	
BHZXL.997C40	N/A	2G40 / 2G40H	18,9@2650	25	3,7	37,6@2650	25	3,7	
BHZXL.997C40	N/A	2G40 / 2G40H	18,6@2600	25	3,6	37,8@2600	25	3,6	
BHZXL.997C40	N/A	2G40 / 2G40H	19,7@3000	24	4,0	34,6@3000	24	4,0	
BHZXL.997C40	N/A	2G40 / 2G40H	19,6@2950	24	3,9	35,0@2950	24	3,9	
BHZXL.997C40	N/A	2G40 / 2G40H	19,3@2900	24	3,9	35,1@2900	24	3,9	
BHZXL.997C40	N/A	2G40 / 2G40H	19,0@2850	24	3,8	35,2@2850	24	3,8	
BHZXL.997C40	N/A	2G40 / 2G40H	18,9@2800	24	3,7	35,6@2800	24	3,7	
BHZXL.997C40	N/A	2G40 / 2G40H	18,8@2750	24	3,7	36,0@2750	24	3,7	
BHZXL.997C40	N/A	2G40 / 2G40H	18,5@2700	24	3,6	36,1@2700	24	3,6	
BHZXL.997C40	N/A	2G40 / 2G40H	18,2@2650	24	3,5	36,3@2650	24	3,5	

Motorenfabrik Hatz

Attachment

EO # U-R-034-0258

Nonroad CI

page 2 of 2

2/1/2011

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 (CEA Gross)	7.Fuel Rate: mm3/stroke@peak torque	8.Fuel Rate: (lbs/hr)@peak torque	9.Emission Control Device Per SAE J1930
BHZXL.997C40	N/A	2G40 / 2G40H	18,0@2600	24	3,5	36,4@2600	24	3,5	Mechanical DI
BHZXL.997C40	N/A	2G40 / 2G40H	17,7@2550	24	3,4	36,6@2550	24	3,4	
BHZXL.997C40	N/A	2G40 / 2G40H	17,4@2500	24	3,3	36,7@2500	24	3,3	
BHZXL.997C40	N/A	2G40 / 2G40H	17,0@2450	24	3,3	36,6@2450	24	3,3	
BHZXL.997C40	N/A	2G40 / 2G40H	16,8@2400	24	3,2	36,8@2400	24	3,2	
BHZXL.997C40	N/A	2G40 / 2G40H	16,5@2350	24	3,1	37,0@2350	24	3,1	
BHZXL.997C40	N/A	2G40 / 2G40H	16,1@2300	24	3,1	36,9@2300	24	3,1	
BHZXL.997C40	N/A	2G40 / 2G40H	15,7@2250	24	3,0	36,9@2250	24	3,0	
BHZXL.997C40	N/A	2G40 / 2G40H	15,4@2200	24	2,9	36,9@2200	24	2,9	
BHZXL.997C40	N/A	2G40 / 2G40H	15,1@2150	24	2,9	37,0@2150	24	2,9	
BHZXL.997C40	N/A	2G40 / 2G40H	14,7@2100	24	2,8	37,0@2100	24	2,8	
BHZXL.997C40	N/A	2G40 / 2G40H	14,4@2050	24	2,7	37,1@2050	24	2,7	
BHZXL.997C40	N/A	2G40 / 2G40H	14,1@2000	24	2,7	37,1@2000	24	2,7	
BHZXL.997C40	N/A	2G40 / 2G40H	18,4@3000	22	3,7	32,3@3000	22	3,7	
BHZXL.997C40	N/A	2G40 / 2G40H	18,2@2950	22	3,6	32,6@2950	22	3,6	
BHZXL.997C40	N/A	2G40 / 2G40H	18,1@2900	22	3,6	32,9@2900	22	3,6	
BHZXL.997C40	N/A	2G40 / 2G40H	17,9@2850	22	3,5	33,1@2850	22	3,5	
BHZXL.997C40	N/A	2G40 / 2G40H	17,7@2800	22	3,4	33,3@2800	22	3,4	
BHZXL.997C40	N/A	2G40 / 2G40H	17,6@2750	22	3,4	33,7@2750	22	3,4	
BHZXL.997C40	N/A	2G40 / 2G40H	17,3@2700	22	3,3	33,8@2700	22	3,3	
BHZXL.997C40	N/A	2G40 / 2G40H	17,1@2650	22	3,2	34,0@2650	22	3,2	
BHZXL.997C40	N/A	2G40 / 2G40H	16,9@2600	22	3,2	34,2@2600	22	3,2	
BHZXL.997C40	N/A	2G40 / 2G40H	16,7@2550	22	3,1	34,5@2550	22	3,1	
BHZXL.997C40	N/A	2G40 / 2G40H	16,5@2500	22	3,1	34,8@2500	22	3,1	