California Environmental Protection Agency AIR RESOURCES BOARD	MOTORENFABRIK HATZ	EXECUTIVE ORDER U-R-034-0235 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)
2010	AHZXL3.43V42	3.432	Diesel	8000

SPECIAL FEATURES & EMISSION CONTROL SYSTEMS	TYPICAL EQUIPMENT APPLICATION
Mechanical Direct Injection, Exhaust Gas Recirculation	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
37 ≤ kW < 56	Tier 4 interim	STD	N/A	N/A	4.7	5.0	0.30	20	15	50
		CERT	--	--	4.6	1.8	0.18	7	6	11

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 11 day of February 2010.

Annette Hebert, Chief
Mobile Source Operations Division

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1/28/2010

Engine Model Summary Template

Engine Family	1.Engine Code	2.Engine Model	3.BHP@RPM (SAE Gross)	4.Fuel Rate: mm/stroke @ peak HP (for diesel only)	5.Fuel Rate: (lbs/h) @ peak HP (for diesels only)	6.Torque @ RPM (SEA Gross)	7.Fuel Rate: mm/stroke@peak torque	8.Fuel Rate: (lbs/h)@peak torque	9.Emission Control Device Per SAE J1930
AHZXL3.43V42	N/A	4M42	69,0@3150	44,5	7,8	134@1500	43,0	3,6	Mechanical DI, EGR
AHZXL3.43V42	N/A	4M42	69,0@3000	44,5	7,4	134@1500	43,0	3,6	
AHZXL3.43V42	N/A	4M42	68,1@2950	44,5	7,3	134@1500	43,0	3,6	
AHZXL3.43V42	N/A	4M42	67,3@2900	44,5	7,2	134@1500	43,0	3,6	
AHZXL3.43V42	N/A	4M42	66,3@2850	44,5	7,1	134@1500	43,0	3,6	
AHZXL3.43V42	N/A	4M42	65,5@2800	44,5	6,9	134@1500	43,0	3,6	
AHZXL3.43V42	N/A	4M42	65,1@2750	44,5	6,8	134@1500	43,0	3,6	
AHZXL3.43V42	N/A	4M42	65,0@2700	44,5	6,7	134@1500	43,0	3,6	
AHZXL3.43V42	N/A	4M42	64,7@2650	44,5	6,6	134@1500	43,0	3,6	
AHZXL3.43V42	N/A	4M42	64,3@2600	45,0	6,5	138@1500	44,0	3,7	
AHZXL3.43V42	N/A	4M42	63,1@2550	45,0	6,4	138@1500	44,0	3,7	
AHZXL3.43V42	N/A	4M42	62,2@2500	46,0	6,4	141@1500	45,0	3,8	
AHZXL3.43V42	N/A	4M42	61,5@2450	46,0	6,3	141@1500	45,0	3,8	
AHZXL3.43V42	N/A	4M42	60,7@2400	46,0	6,2	141@1500	45,0	3,8	
AHZXL3.43V42	N/A	4M42	59,4@2350	46,0	6,0	141@1500	45,0	3,8	
AHZXL3.43V42	N/A	4M42	63,8@2300	49,5	6,3	149@2000	49,5	5,5	
AHZXL3.43V42	N/A	4M42	62,4@2250	49,5	6,2	149@2000	49,5	5,5	
AHZXL3.43V42	N/A	4M42	61,2@2200	49,5	6,1	149@2000	49,5	5,5	
AHZXL3.43V42	N/A	4M42	60,0@2150	49,5	5,9	147@2150	49,5	5,9	
AHZXL3.43V42	N/A	4M42	59,0@2100	49,5	5,8	147@2100	49,5	5,8	
AHZXL3.43V42	N/A	4M42	57,8@2050	49,5	5,7	148@2050	49,5	5,7	
AHZXL3.43V42	N/A	4M42	56,8@2000	49,5	5,5	149@2000	49,5	5,5	
AHZXL3.43V42	N/A	4M42	55,3@1950	49,0	5,3	149@1950	49,0	5,3	
AHZXL3.43V42	N/A	4M42	54,1@1900	49,0	5,2	150@1900	49,0	5,2	
AHZXL3.43V42	N/A	4M42	52,9@1850	49,0	5,1	150@1850	49,0	5,1	
AHZXL3.43V42	N/A	4M42	51,7@1800	49,0	4,9	151@1800	49,0	4,9	

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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.Emission Control Device Per SAE J1930
AHZXL3.43V42	N/A	4M42	62,7@3000	40,0	6,7	128@1500	40,5	3,4	Mechanical DI, EGR
AHZXL3.43V42	N/A	4M42	61,9@2950	40,0	6,6	128@1500	40,5	3,4	
AHZXL3.43V42	N/A	4M42	61,1@2900	40,0	6,5	126@1500	40,0	3,3	
AHZXL3.43V42	N/A	4M42	60,3@2850	40,0	6,4	126@1500	40,0	3,3	
AHZXL3.43V42	N/A	4M42	59,5@2800	40,0	6,2	126@1500	40,0	3,3	
AHZXL3.43V42	N/A	4M42	59,2@2750	40,5	6,2	126@1500	40,0	3,3	
AHZXL3.43V42	N/A	4M42	58,8@2700	40,5	6,1	126@1500	40,0	3,3	
AHZXL3.43V42	N/A	4M42	58,8@2650	40,5	6,0	126@1500	40,0	3,3	
AHZXL3.43V42	N/A	4M42	58,4@2600	40,5	5,9	126@1500	40,0	3,3	
AHZXL3.43V42	N/A	4M42	57,5@2550	40,5	5,8	126@1500	40,0	3,3	
AHZXL3.43V42	N/A	4M42	56,7@2500	41,0	5,7	126@1500	40,0	3,3	
AHZXL3.43V42	N/A	4M42	55,9@2450	41,0	5,6	126@1500	40,0	3,3	
AHZXL3.43V42	N/A	4M42	55,1@2400	41,0	5,5	126@1500	40,0	3,3	
AHZXL3.43V42	N/A	4M42	53,5@2350	41,0	5,4	133@1500	42,5	3,6	
AHZXL3.43V42	N/A	4M42	58,0@2300	45,0	5,8	141@1500	45,0	3,8	
AHZXL3.43V42	N/A	4M42Z	67,0@3150	44,5	7,8	131@1500	43,0	3,6	
AHZXL3.43V42	N/A	4M42Z	67,0@3000	44,5	7,4	131@1500	43,0	3,6	
AHZXL3.43V42	N/A	4M42Z	66,1@2950	44,5	7,3	131@1500	43,0	3,6	
AHZXL3.43V42	N/A	4M42Z	65,3@2900	44,5	7,2	131@1500	43,0	3,6	
AHZXL3.43V42	N/A	4M42Z	64,3@2850	44,5	7,1	131@1500	43,0	3,6	
AHZXL3.43V42	N/A	4M42Z	63,5@2800	44,5	6,9	131@1500	43,0	3,6	
AHZXL3.43V42	N/A	4M42Z	63,1@2750	44,5	6,8	131@1500	43,0	3,6	
AHZXL3.43V42	N/A	4M42Z	63,0@2700	44,5	6,7	131@1500	43,0	3,6	
AHZXL3.43V42	N/A	4M42Z	62,7@2650	44,5	6,6	131@1500	43,0	3,6	
AHZXL3.43V42	N/A	4M42Z	62,3@2600	45,0	6,5	131@1500	44,0	3,7	
AHZXL3.43V42	N/A	4M42Z	61,1@2550	45,0	6,4	131@1500	44,0	3,7	

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Engine Model Summary Template

Engine Family	1.Engine Code	2.Engine Model	3.8HP@RPM (SAE Gross)	4.Fuel Rate: mm³/stroke @ peak HP (for diesel only)	5.Fuel Rate: (lbs/h) @ peak HP (for diesel only)	6.Torque @ RPM (SEA Gross)	7.Fuel Rate: mm³/stroke@peak torque	8.Fuel Rate: (lbs/h)@peak torque	9.Emission Control Device Per SAE J1930
AHZXL3.43V42	N/A	4M42Z	60,8@2500	46,0	6,4	138@1500	45,0	3,8	Mechanical DI, EGR
AHZXL3.43V42	N/A	4M42Z	60,2@2450	46,0	6,3	138@1500	45,0	3,8	
AHZXL3.43V42	N/A	4M42Z	59,4@2400	46,0	6,2	138@1500	45,0	3,8	
AHZXL3.43V42	N/A	4M42Z	58,0@2350	46,0	6,0	138@1500	45,0	3,8	
AHZXL3.43V42	N/A	4M42Z	62,4@2300	49,5	6,3	146@2000	49,5	5,5	
AHZXL3.43V42	N/A	4M42Z	61,1@2250	49,5	6,2	146@2000	49,5	5,5	
AHZXL3.43V42	N/A	4M42Z	59,9@2200	49,5	6,1	146@2000	49,5	5,5	
AHZXL3.43V42	N/A	4M42Z	58,7@2150	49,5	5,9	144@2150	49,5	5,9	
AHZXL3.43V42	N/A	4M42Z	57,6@2100	49,5	5,8	145@2100	49,5	5,8	
AHZXL3.43V42	N/A	4M42Z	56,4@2050	49,5	5,7	145@2050	49,5	5,7	
AHZXL3.43V42	N/A	4M42Z	55,5@2000	49,5	5,5	146@2000	49,5	5,5	
AHZXL3.43V42	N/A	4M42Z	54,0@1950	49,0	5,3	145@1950	49,0	5,3	
AHZXL3.43V42	N/A	4M42Z	52,8@1900	49,0	5,2	146@1900	49,0	5,2	
AHZXL3.43V42	N/A	4M42Z	51,6@1850	49,0	5,1	147@1850	49,0	5,1	
AHZXL3.43V42	N/A	4M42Z	50,4@1800	49,0	4,9	147@1800	49,0	4,9	
AHZXL3.43V42	N/A	4M42Z	60,7@3000	40,0	6,7	125@1500	40,5	3,4	
AHZXL3.43V42	N/A	4M42Z	59,9@2950	40,0	6,6	125@1500	40,5	3,4	
AHZXL3.43V42	N/A	4M42Z	59,1@2900	40,0	6,5	124@1500	40,0	3,3	
AHZXL3.43V42	N/A	4M42Z	58,3@2850	40,0	6,4	124@1500	40,0	3,3	
AHZXL3.43V42	N/A	4M42Z	57,5@2800	40,0	6,2	124@1500	40,0	3,3	
AHZXL3.43V42	N/A	4M42Z	57,2@2750	40,5	6,2	124@1500	40,0	3,3	
AHZXL3.43V42	N/A	4M42Z	56,8@2700	40,5	6,1	124@1500	40,0	3,3	
AHZXL3.43V42	N/A	4M42Z	56,8@2650	40,5	6,0	124@1500	40,0	3,3	
AHZXL3.43V42	N/A	4M42Z	56,4@2600	40,5	5,9	124@1500	40,0	3,3	
AHZXL3.43V42	N/A	4M42Z	55,5@2550	40,5	5,8	124@1500	40,0	3,3	
AHZXL3.43V42	N/A	4M42Z	55,3@2500	41,0	5,7	124@1500	40,0	3,3	

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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/h) @ peak HP (for diesel only)	6.Torque @ RPM (SEA Gross)	7.Fuel Rate: mm³/stroke@peak torque	8.Fuel Rate: (lbs/h)@peak torque	9.Emission Control Device Per SAE J1930
AHZXL3.43V42	N/A	4M42Z	54,5@2450	41,0	5,6	124@1500	40,0	3,3	Mechanical DI, EGR
AHZXL3.43V42	N/A	4M42Z	53,7@2400	41,0	5,5	124@1500	40,0	3,3	
AHZXL3.43V42	N/A	4M42Z	52,1@2350	41,0	5,4	132@1500	42,5	3,6	
AHZXL3.43V42	N/A	4M42Z	56,7@2300	45,0	5,8	138@1500	45,0	3,8	
AHZXL3.43V42	N/A	4L42C	61,8@3150	42,5	7,5	130@1500	42,0	3,5	
AHZXL3.43V42	N/A	4L42C	61,8@3000	42,5	7,1	130@1500	42,0	3,5	
AHZXL3.43V42	N/A	4L42C	61,1@2950	42,5	7,0	130@1500	42,0	3,5	
AHZXL3.43V42	N/A	4L42C	60,7@2900	42,5	6,9	130@1500	42,0	3,5	
AHZXL3.43V42	N/A	4L42C	60,2@2850	42,5	6,8	130@1500	42,0	3,5	
AHZXL3.43V42	N/A	4L42C	60,0@2800	42,5	6,6	130@1500	42,0	3,5	
AHZXL3.43V42	N/A	4L42C	59,5@2750	43,0	6,6	130@1500	42,0	3,5	
AHZXL3.43V42	N/A	4L42C	59,0@2700	43,0	6,5	130@1500	42,0	3,5	
AHZXL3.43V42	N/A	4L42C	58,7@2650	43,0	6,4	130@1500	42,0	3,5	
AHZXL3.43V42	N/A	4L42C	58,3@2600	43,5	6,3	130@1500	42,0	3,5	
AHZXL3.43V42	N/A	4L42C	57,6@2550	43,5	6,2	130@1500	42,0	3,5	
AHZXL3.43V42	N/A	4L42C	57,0@2500	43,5	6,1	130@1500	42,0	3,5	
AHZXL3.43V42	N/A	4L42C	56,3@2450	43,5	5,9	130@1500	42,0	3,5	
AHZXL3.43V42	N/A	4L42C	55,6@2400	43,5	5,8	130@1500	42,0	3,5	
AHZXL3.43V42	N/A	4L42C	54,7@2350	43,5	5,7	131@1500	43,0	3,6	
AHZXL3.43V42	N/A	4L42C	60,4@2300	49,0	6,3	140@2000	49,0	5,5	
AHZXL3.43V42	N/A	4L42C	59,2@2250	49,0	6,1	141@2000	49,0	5,5	
AHZXL3.43V42	N/A	4L42C	58,2@2200	49,0	6,0	141@2000	49,0	5,5	
AHZXL3.43V42	N/A	4L42C	57,0@2150	49,0	5,9	139@2150	49,0	5,9	
AHZXL3.43V42	N/A	4L42C	55,9@2100	49,0	5,7	140@2100	49,0	5,7	
AHZXL3.43V42	N/A	4L42C	54,8@2050	49,0	5,6	141@2050	49,0	5,6	
AHZXL3.43V42	N/A	4L42C	53,6@2000	49,0	5,5	141@2000	49,0	5,5	

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Engine Model Summary Template

Engine Family	1.Engine Code	2.Engine Model	3.Max HP@RPM (SAE Gross)	4.Fuel Rate: mm³/stroke @ peak HP (for diesel only)	5.Fuel Rate: (lbs/hr) @ peak HP (for diesel only)	6.Torque @ RPM (SEA Gross)	7.Fuel Rate: mm³/stroke@peak torque	8.Fuel Rate: (lbs/hr)@peak torque	9.Emission Control Device Per SAE J1930
AHZXL3.43V42	N/A	4L42C	52,5@1950	48,0	5,2	142@1950	48,0	5,2	Mechanical DI, EGR
AHZXL3.43V42	N/A	4L42C	51,3@1900	48,0	5,1	142@1900	48,0	5,1	
AHZXL3.43V42	N/A	4L42C	50,3@1850	48,0	5,0	143@1850	48,0	5,0	
AHZXL3.43V42	N/A	4L42C	55,9@3000	38,5	6,4	119@1800	41,0	4,1	
AHZXL3.43V42	N/A	4L42C	55,5@2950	38,5	6,3	119@1800	41,0	4,1	
AHZXL3.43V42	N/A	4L42C	55,2@2900	38,5	6,2	119@1800	41,0	4,1	
AHZXL3.43V42	N/A	4L42C	54,7@2850	38,5	6,1	112@1500	39,0	3,3	
AHZXL3.43V42	N/A	4L42C	54,4@2800	38,5	6,0	112@1500	39,0	3,3	
AHZXL3.43V42	N/A	4L42C	54,0@2750	38,5	5,9	112@1500	39,0	3,3	
AHZXL3.43V42	N/A	4L42C	53,7@2700	38,5	5,8	112@1500	39,0	3,3	
AHZXL3.43V42	N/A	4L42C	53,3@2650	38,5	5,7	112@1500	39,0	3,3	
AHZXL3.43V42	N/A	4L42C	52,5@2600	39,0	5,7	114@1500	40,0	3,3	
AHZXL3.43V42	N/A	4L42C	52,1@2550	39,0	5,5	114@1500	40,0	3,3	
AHZXL3.43V42	N/A	4L42C	51,7@2500	39,0	5,4	114@1500	40,0	3,3	
AHZXL3.43V42	N/A	4L42C	51,2@2450	39,0	5,3	114@1500	40,0	3,3	
AHZXL3.43V42	N/A	4L42C	50,7@2400	39,0	5,2	114@1500	40,0	3,3	
AHZXL3.43V42	N/A	4L42C	49,7@2350	39,0	5,1	114@1500	40,0	3,3	
AHZXL3.43V42	N/A	4L42C	54,5@2300	43,5	5,6	125@2300	43,5	5,6	