

PERKINS ENGINES COMPANY LTD.

EXECUTIVE ORDER U-R-022-0171 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	BPKXL7.01BL1	7.01	Diesel	8000			
	FEATURES & EMISSION (TYPICAL EQUIPMENT APPLICATION				
Electroni Coole Re	ic Direct Injection, Turboo er, Engine Control Modul circulation, Diesel Oxida Periodic Trap Oxid	tion Catalyst,	Crane, Loader, Tractor, Dozer, Pump, Compressor, 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	EMISSION			E	XHAUST (g/kw-l	OPACITY (%)				
CLASS	STANDARD CATEGORY		нс	NOx	NMHC+NOx	co	PM	ACCEL	LUG	PEAK
130 ≤ kW ≤ 560	Tier 4 - ALT NOX	STD	0.19	2.0	N/A	3.5	0.02	N/A	N/A	N/A
		CERT	0.03	1.9		0.2	0.005		-	

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 ______day of February 2011.

Annette Hebert, Chief

Mobile Source Operations Division

Attachment 1 af 2

Engine Model Summary Template

U-R-022-0171 2-14-2011

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/hr) @ peak HP (for diesels only)	6.Torque @ RPM (SEA Gross)	7.Fuel Rate: mm/stroke@peak torque	8.Fuel Rate: (lbs/hr)@peak torqu	9.Emission Control eDevice Per SAE J1930
BPKXL7.01BL1	Cert Test 1	3566/2200	275@2200	146	106	927@1400	193	89	DDI TAA ECM DOC PTOX EGR
BPKXL7.01BL1	1	3566/2200	275@2200	146	106	927@1400	193	89	DDI TAA ECM DOC PTOX EGR
BPKXL7.01BL1	2	3564/2200	250@2200	130	94	842@1400	178	82	DDI TAA ECM DOC PTOX EGR
BPKXL7.01BL1	3	3562/2200	237@2200	. 127	92	801@1400	165	76	DDI TAA ECM DOC PTOX EGR
BPKXL7.01BL1	4	3558/2200	213@2200	120	87	718@1400	148	68	DDI TAA ECM DOC PTOX EGR
BPKXL7.01BL1	5	3556/2200	202@2200	111	80	680@1400	146	67	DDI TAA ECM DOC PTOX EGR
BPKXL7.01BL1	6	3552/2200	188@2200	99	72	656@1400	139	64	DDI TAA ECM DOC PTOX EGR
BPKXL7.01BL1	7	3710/2100	172@2100	99	68	627@1000	131	43	DDI TAA ECM DOC PTOX EGR
BPKXL7.01BL1	8	3708/2100	192@2100	109.5	76	707@1000	153.5	50	DDI TAA ECM DOC PTOX EGR

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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/hr) @ peak HP (for diesels only)	6.Torque @ RPM (SEA Gross)	7.Fuel Rate: mm/stroke@peak torque	8.Fuel Rate: (lbs/hr)@peak torque	9.Emission Control PDevice Per SAE J1930
BPKXL7.01BL1	9	3702/2100	212@2100	121.5	84	763@1200	164	65	DDI TAA ECM DOC PTOX EGR
BPKXL7.01BL1	10	3690/1800	204@1800	122	72	687@1400	148.5	68	DDI TAA ECM DOC PTOX EGR
BPKXL7.01BL1	11	3688/1800	241@1800	148	88	791@1400	169	78	DDI TAA ECM DOC PTOX EGR
BPKXL7.01BL1	12	3560/2200	225@2200	118.5	86	758@1400	161	74	DDI TAA ECM DOC PTOX EGR
BPKXL7.01BL1	13	3666/2150	239@2150	130	92	777@1300	165	71	DDI TAA ECM DOC PTOX EGR
BPKXL7.01BL1	14	3698/2150	219@2150	116.5	82	777@1300	165	71	DDI TAA ECM DOC PTOX EGR
BPKXL7.01BL1	Cert Test 15	3730/1800	321@1800	198	117	935@1800	198	117	DDI TAA ECM DOC PTOX EGR
BPKXL7.01BL1	. 15	3730/1800	321@1800	198	117	935@1800	198	117	DDI TAA ECM DOC PTOX EGR
BPKXL7.01BL1	16	3728/1800	247@1800	140	83	720@1800	140	83	DDI TAA ECM DOC PTOX EGR