



PERKINS ENGINES COMPANY LTD.

EXECUTIVE ORDER U-R-022-0309
New Off-Road
Compression-Ignition Engines

Pursuant to the authority vested in California 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-19-095;

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)
2022	NPKXL04.4MT1	4.4	Diesel	8000
SPECIAL FEATURES & EMISSION CONTROL SYSTEMS			TYPICAL EQUIPMENT APPLICATION	
Electronic Direct Injection, Turbocharger, Electronic Control Module, Diesel Oxidation Catalyst, Exhaust Gas Recirculation, Charge Air Cooler, Selective Catalytic Reduction – Urea, Ammonia Oxidation Catalyst			Crane, Loaders, 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 non-methane hydrocarbon (NMHC), 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 (%)		
			NMHC	NOx	NMHC+NOx	CO	PM	ACCEL	LUG	PEAK
56 ≤ kW < 130	Tier 4 Final	STD	0.19	0.40	N/A	5.0	0.02	N/A	N/A	N/A
		CERT	0.01	0.30	--	0.02	0.01	--	--	--

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).

BE IT FURTHER RESOLVED: That for the listed engine models which include engines from different power categories in the same engine family, the manufacturer is complying with the more stringent set of standards from the 56 ≤ kW < 130 power categories in conformance with the incorporated Section 1039.230 (e) of the "California Exhaust Emission Standards and Test Procedures for New 2011 and Later Tier 4 Off-Road Compression Ignition Engines, Part 1-D" adopted October 20, 2005 and last amended October 25, 2012.

BE IT FURTHER RESOLVED: That the manufacturer has elected to include engine models in this engine family which are identified for "emergency vehicle use only". These "emergency vehicle use only" engines are exempt from requirements imposed pursuant to California law and the regulations adopted pursuant thereto for motor vehicle pollution control devices per California Vehicle Code Section 27156.2. The manufacturer must clearly label these engines for "emergency vehicle use only" on the engines' emission control label.



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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 on this 14th day of December 2021.

A handwritten signature in blue ink, appearing to read 'Allen Lyons'.

Allen Lyons, Chief
Emissions Certification and Compliance Division

Attachment: Engine Models

EO #: U-R-022-0309

Family: NPKXL04.4MT1

Attachment Last Revised: 11/8/2021

Model	Code	Trim	Config	Displacement	Displacement - Units	Peak Power	Peak Power - Units	Peak Power - Speed (rpm)	Peak Power - Fueling	Peak Power - Fuel Units	Peak Torque	Peak Torque - Units	Peak Torque - Speed (rpm)	Peak Torque - Fuel Units	Peak Torque - Fuel	OBD	GHG	Special	Notes
4074/2200	Cert Test 1	N/A	I4	4.4	Liters	148	horsepower	2200	55	lb/hr	413	lb-ft	1400	39	lb/hr	N/A	N/A	N/A	N/A
4074/2200	1	N/A	I4	4.4	Liters	148	horsepower	2200	55	lb/hr	413	lb-ft	1400	39	lb/hr	N/A	N/A	N/A	N/A
4138/2200	2	N/A	I4	4.4	Liters	142	horsepower	2200	53	lb/hr	413	lb-ft	1400	38	lb/hr	N/A	N/A	N/A	N/A
4136/2200	3	N/A	I4	4.4	Liters	137	horsepower	2200	51	lb/hr	413	lb-ft	1400	39	lb/hr	N/A	N/A	N/A	N/A
4134/2200	4	N/A	I4	4.4	Liters	131	horsepower	2200	50	lb/hr	391	lb-ft	1400	37	lb/hr	N/A	N/A	N/A	N/A
4132/2200	5	N/A	I4	4.4	Liters	124	horsepower	2200	45	lb/hr	391	lb-ft	1400	37	lb/hr	N/A	N/A	N/A	N/A
4092/2200	6	N/A	I4	4.4	Liters	122	horsepower	2200	45	lb/hr	369	lb-ft	1400	35	lb/hr	N/A	N/A	N/A	N/A
4328/2000	7	N/A	I4	4.4	Liters	122	horsepower	2000	44	lb/hr	369	lb-ft	1400	35	lb/hr	N/A	N/A	N/A	N/A
4130/2200	8	N/A	I4	4.4	Liters	115	horsepower	2200	43	lb/hr	369	lb-ft	1400	35	lb/hr	N/A	N/A	N/A	N/A
4126/2200	9	N/A	I4	4.4	Liters	110	horsepower	2200	42	lb/hr	332	lb-ft	1400	31	lb/hr	N/A	N/A	N/A	N/A
4128/2200	10	N/A	I4	4.4	Liters	100	horsepower	2200	39	lb/hr	332	lb-ft	1400	31	lb/hr	N/A	N/A	N/A	N/A
4248/2000	11	N/A	I4	4.4	Liters	100	horsepower	2000	38	lb/hr	332	lb-ft	1400	31	lb/hr	N/A	N/A	N/A	N/A
4072/2200	12	N/A	I4	4.4	Liters	94	horsepower	2200	38	lb/hr	332	lb-ft	1400	31	lb/hr	N/A	N/A	N/A	N/A
3996/2200	13	N/A	I4	4.4	Liters	88	horsepower	2200	36	lb/hr	332	lb-ft	1400	31	lb/hr	N/A	N/A	N/A	N/A
4132/2200	14 AK444 (Emergency)	N/A	I4	4.4	Liters	124	horsepower	2200	45	lb/hr	391	lb-ft	1400	37	lb/hr	N/A	N/A	N/A	N/A
4126/2200	15 AK444 (Emergency)	N/A	I4	4.4	Liters	110	horsepower	2200	42	lb/hr	332	lb-ft	1400	31	lb/hr	N/A	N/A	N/A	N/A
4128/2200	16 AK444 (Emergency)	N/A	I4	4.4	Liters	100	horsepower	2200	39	lb/hr	332	lb-ft	1400	31	lb/hr	N/A	N/A	N/A	N/A
3996/2200	17 AK444 (Emergency)	N/A	I4	4.4	Liters	88	horsepower	2200	36	lb/hr	332	lb-ft	1400	31	lb/hr	N/A	N/A	N/A	N/A