

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	NPKXL07.0BN1	7.01	Diesel	8000
SPECIAL FEATURES & EMISSION CONTROL SYSTEMS			TYPICAL EQUIPMENT APPLICATION	
Electronic Direct Injection, Turbocharger, Electronic Control Module, Diesel Oxidation Catalyst, Periodic Trap Oxidizer, 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), or family emission limit(s) (FEL) as applicable, and certification levels (CERT) for non-methane hydrocarbon (NMHC), oxides of nitrogen (NO<sub>x</sub>), or non-methane hydrocarbon plus oxides of nitrogen (NMHC+NO<sub>x</sub>), 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	NO <sub>x</sub>	NMHC+NO <sub>x</sub>	CO	PM	ACCEL	LUG	PEAK
75 ≤ kW ≤ 560	Tier 4 Final	<b>STD</b>	0.19	0.40	N/A	3.5	0.02	N/A	N/A	N/A
		<b>FEL</b>	N/A	N/A	N/A	N/A	0.01	N/A	N/A	N/A
		<b>CERT</b>	0.01	0.27	--	1.3	0.002	--	--	--

**BE IT FURTHER RESOLVED:** That the family emission limit(s) (FEL) is an emission level declared by the manufacturer for use in any averaging, banking and trading program and in lieu of an emission standard for certification. It serves as the applicable emission standard for determining compliance of any engine within this engine family under 13 CCR Sections 2423 and 2427.

**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 130 ≤ kW ≤ 560 power category 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.



PERKINS ENGINES COMPANY LTD.

EXECUTIVE ORDER U-R-022-0303  
New Off-Road  
Compression-Ignition Engines

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-022-0303

**Family:** NPKXL07.0BN1

**Attachment Last Revised:** 11/6/2021

Model	Code	Trim	Config	Displacement	Displacement -		Peak Power -		Peak Power -		Peak Power - Fuel		Peak Torque -		Peak Torque - Fuel		OBD	GHG	Special	Notes
					Units	Peak Power	Units	Speed (rpm)	Fueling	Units	Peak Torque	Units	Speed (rpm)	Peak Torque - Fuel	Units					
3924/2200	Cert Test 1	N/A	I6	7.01	Liters	275	horsepower	2200	104	lb/hr	927	lb-ft	1400	86	lb/hr	N/A	N/A	N/A	N/A	
3960/2200	2	N/A	I6	7.01	Liters	269	horsepower	2200	101	lb/hr	918	lb-ft	1400	85	lb/hr	N/A	N/A	N/A	N/A	
3926/2200	3	N/A	I6	7.01	Liters	250	horsepower	2200	93	lb/hr	895	lb-ft	1400	82	lb/hr	N/A	N/A	N/A	N/A	
4038/2200	4	N/A	I6	7.01	Liters	250	horsepower	2200	93	lb/hr	895	lb-ft	1400	82	lb/hr	N/A	N/A	N/A	N/A	
3962/2200	5	N/A	I6	7.01	Liters	248	horsepower	2200	92	lb/hr	908	lb-ft	1300	78	lb/hr	N/A	N/A	N/A	N/A	
3976/1800	6	N/A	I6	7.01	Liters	239	horsepower	1800	83	lb/hr	766	lb-ft	1400	70	lb/hr	N/A	N/A	N/A	N/A	
3928/2200	7	N/A	I6	7.01	Liters	225	horsepower	2200	83	lb/hr	805	lb-ft	1400	74	lb/hr	N/A	N/A	N/A	N/A	
4036/2200	8	N/A	I6	7.01	Liters	225	horsepower	2200	83	lb/hr	805	lb-ft	1400	74	lb/hr	N/A	N/A	N/A	N/A	
3966/2200	9	N/A	I6	7.01	Liters	215	horsepower	2200	79	lb/hr	735	lb-ft	1400	64	lb/hr	N/A	N/A	N/A	N/A	
3930/2200	10	N/A	I6	7.01	Liters	202	horsepower	2200	75	lb/hr	725	lb-ft	1400	64	lb/hr	N/A	N/A	N/A	N/A	
4034/2200	11	N/A	I6	7.01	Liters	202	horsepower	2200	75	lb/hr	725	lb-ft	1400	64	lb/hr	N/A	N/A	N/A	N/A	
3978/1800	12	N/A	I6	7.01	Liters	204	horsepower	1800	72	lb/hr	642	lb-ft	1400	57	lb/hr	N/A	N/A	N/A	N/A	
3932/2200	13	N/A	I6	7.01	Liters	202	horsepower	2200	75	lb/hr	642	lb-ft	1400	57	lb/hr	N/A	N/A	N/A	N/A	
4052/1800	14	N/A	I6	7.01	Liters	188	horsepower	1800	65	lb/hr	642	lb-ft	1400	57	lb/hr	N/A	N/A	N/A	N/A	
4054/2000	15	N/A	I6	7.01	Liters	176	horsepower	2000	62	lb/hr	637	lb-ft	1400	56	lb/hr	N/A	N/A	N/A	N/A	
3934/2200	16	N/A	I6	7.01	Liters	174	horsepower	2200	64	lb/hr	621	lb-ft	1400	55	lb/hr	N/A	N/A	N/A	N/A	
4028/2200	17	N/A	I6	7.01	Liters	147	horsepower	2200	64	lb/hr	621	lb-ft	1400	55	lb/hr	N/A	N/A	N/A	N/A	
4032/2200	18	N/A	I6	7.01	Liters	173	horsepower	2200	64	lb/hr	642	lb-ft	1400	57	lb/hr	N/A	N/A	N/A	N/A	
4064/1800	19	N/A	I6	7.01	Liters	164	horsepower	1800	57	lb/hr	586	lb-ft	1400	52	lb/hr	N/A	N/A	N/A	N/A	
3990/1800	20	N/A	I6	7.01	Liters	164	horsepower	1800	57	lb/hr	547	lb-ft	1400	49	lb/hr	N/A	N/A	N/A	N/A	
3936/2200	21	N/A	I6	7.01	Liters	156	horsepower	2200	59	lb/hr	557	lb-ft	1400	50	lb/hr	N/A	N/A	N/A	N/A	
4050/2200	22	N/A	I6	7.01	Liters	156	horsepower	2200	59	lb/hr	557	lb-ft	1400	50	lb/hr	N/A	N/A	N/A	N/A	
4060/1800	23	N/A	I6	7.01	Liters	153	horsepower	1800	53	lb/hr	532	lb-ft	1400	48	lb/hr	N/A	N/A	N/A	N/A	
4354/2200	24	N/A	I6	7.01	Liters	273	horsepower	2200	103	lb/hr	927	lb-ft	1400	86	lb/hr	N/A	N/A	N/A	N/A	
4356/2200	25	N/A	I6	7.01	Liters	250	horsepower	2200	93	lb/hr	895	lb-ft	1400	82	lb/hr	N/A	N/A	N/A	N/A	
4358/2200	26	N/A	I6	7.01	Liters	225	horsepower	2200	83	lb/hr	805	lb-ft	1400	74	lb/hr	N/A	N/A	N/A	N/A	
4360/2200	27	N/A	I6	7.01	Liters	202	horsepower	2200	75	lb/hr	725	lb-ft	1400	64	lb/hr	N/A	N/A	N/A	N/A	
4346/2200	Cert Test 28	N/A	I6	7.01	Liters	302	horsepower	2200	113	lb/hr	946	lb-ft	1400	86	lb/hr	N/A	N/A	N/A	N/A	
4346/2200	28	N/A	I6	7.01	Liters	302	horsepower	2200	113	lb/hr	946	lb-ft	1400	86	lb/hr	N/A	N/A	N/A	N/A	
4348/2200	29	N/A	I6	7.01	Liters	302	horsepower	2200	113	lb/hr	940	lb-ft	1400	82	lb/hr	N/A	N/A	N/A	N/A	
4350/1800	Cert Test 30	N/A	I6	7.01	Liters	321	horsepower	1800	117	lb/hr	935	lb-ft	1800	117	lb/hr	N/A	N/A	N/A	N/A	
4350/1800	30	N/A	I6	7.01	Liters	321	horsepower	1800	115	lb/hr	935	lb-ft	1800	115	lb/hr	N/A	N/A	N/A	N/A	
4352/1800	31	N/A	I6	7.01	Liters	247	horsepower	1800	83	lb/hr	720	lb-ft	1800	83	lb/hr	N/A	N/A	N/A	N/A	
4460/2200	32	N/A	I6	7.01	Liters	227	horsepower	2200	83	lb/hr	805	lb-ft	1400	75	lb/hr	N/A	N/A	N/A	N/A	
4530/2200	33	N/A	I6	7.01	Liters	178	horsepower	2200	67	lb/hr	642	lb-ft	1400	57	lb/hr	N/A	N/A	N/A	N/A	
4530/2200	34	N/A	I6	7.01	Liters	178	horsepower	2200	67	lb/hr	642	lb-ft	1400	57	lb/hr	N/A	N/A	N/A	Emergency	
6264/1800	35	N/A	I6	7.01	Liters	163	horsepower	1800	67	lb/hr	795	lb-ft	1400	52	lb/hr	N/A	N/A	N/A	N/A	