

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)
2023	PYDXL02.2NDA	2.190	Diesel	5000
SPECIAL FEATURES & EMISSION CONTROL SYSTEMS			TYPICAL EQUIPMENT APPLICATION	
Electronic Direct Injection, Exhaust Gas Recirculation, Electronic Control Module, Periodic Trap Oxidizer, Oxidation Catalyst			Crane, Loader, Tractor, Dozer, Pump, Compressor, Excavator	

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 (NO_x), or non-methane hydrocarbon plus oxides of nitrogen (NMHC+NO_x), 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 _x	NMHC+NO _x	CO	PM	ACCEL	LUG	PEAK
19 ≤ kW < 37	Tier 4 Final	STD	N/A	N/A	4.7	5.5	0.03	N/A	N/A	N/A
		CERT	--	--	3.3	0.1	0.001	--	--	--

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 on this 12th day of January 2023.



Robin U. Lang, Chief
 Emissions Certification and Compliance Division

Attachment: Engine Models**EO #:** U-R-028-1080**Family:** PYDXL02.2NDA**Attachment Last Revised:** 12/29/2022

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	OBD	GHG	Special	Notes	
4NNDPC			I4	2.190	Liters	48.8	horsepower	3000	29.8	mm3/stroke	107.6	lb-ft	1950	34.9	mm3/stroke				
4NNDAC			I4	2.190	Liters	47.6	horsepower	3000	29.0	mm3/stroke	103.5	lb-ft	1950	33.5	mm3/stroke				
4NNKAC			I4	2.190	Liters	46.0	horsepower	2800	29.6	mm3/stroke	103.5	lb-ft	1820	33.3	mm3/stroke				
4NNMAC			I4	2.190	Liters	42.5	horsepower	2600	29.0	mm3/stroke	103.5	lb-ft	1690	33.3	mm3/stroke				
4NNNAC			I4	2.190	Liters	40.9	horsepower	2500	28.8	mm3/stroke	103.5	lb-ft	1625	33.3	mm3/stroke				
4NNPAC			I4	2.190	Liters	39.0	horsepower	2400	28.3	mm3/stroke	102.6	lb-ft	1560	33.0	mm3/stroke				
4NNSAC			I4	2.190	Liters	35.8	horsepower	2200	28.0	mm3/stroke	102.6	lb-ft	1430	33.0	mm3/stroke				
4NNKCC			I4	2.190	Liters	41.4	horsepower	2800	26.5	mm3/stroke	93.3	lb-ft	1820	29.9	mm3/stroke				
4NNDACOT			I4	2.190	Liters	47.6	horsepower	3000	29.0	mm3/stroke	103.5	lb-ft	1950	33.5	mm3/stroke				
4NNNACOT			I4	2.190	Liters	40.9	horsepower	2500	28.8	mm3/stroke	103.5	lb-ft	1625	33.3	mm3/stroke				
4NNPACOT			I4	2.190	Liters	39.0	horsepower	2400	28.3	mm3/stroke	102.6	lb-ft	1560	33.0	mm3/stroke				
4D88E-7			I4	2.190	Liters	39.0	horsepower	2400	28.3	mm3/stroke	102.6	lb-ft	1560	33.0	mm3/stroke				