



YANMAR POWER TECHNOLOGY CO., LTD

EXECUTIVE ORDER U-R-028-1037  
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	NYDXL04.6HDA	4.571	Diesel	8,000
SPECIAL FEATURES & EMISSION CONTROL SYSTEMS			TYPICAL EQUIPMENT APPLICATION	
Electronic Direct Injection, Exhaust Gas Recirculation, Electronic Control Module, Turbocharger, Charge Air Cooler, Periodic Trap Oxidizer, Oxidation Catalyst, Selective Catalytic Reduction – Urea, Ammonia 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 (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
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>CERT</b>	0.01	0.21	--	0.4	0.004	--	--	--

**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.

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 2nd day of January 2022.

Allen Lyons, Chief  
Emissions Certification and Compliance Division

**Attachment: Engine Models**

EO #: **U-R-028-1037**

Family: **NYDXL04.6HDA**

Attachment Last Revised: **12/15/2021**

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	Peak Torque - Fuel Units	OBD	GHG	Special	Notes
4XDSPC	N/A	N/A	I4	4.571	Liters	214.9	horsepower	2200	150.9	mm3/stroke	610.0	lb-ft	1500	172.5	mm3/stroke	N/A	N/A	None	None
4XD SAC	N/A	N/A	I4	4.571	Liters	207.8	horsepower	2200	150.0	mm3/stroke	593.5	lb-ft	1500	171.1	mm3/stroke	N/A	N/A	None	None
4XDWAC	N/A	N/A	I4	4.571	Liters	188.9	horsepower	2000	145.1	mm3/stroke	593.5	lb-ft	1500	171.1	mm3/stroke	N/A	N/A	None	None
4XDYCC	N/A	N/A	I4	4.571	Liters	170.3	horsepower	1900	136.4	mm3/stroke	593.5	lb-ft	1500	171.1	mm3/stroke	N/A	N/A	None	None
4XDSCC	N/A	N/A	I4	4.571	Liters	170.3	horsepower	2200	123.3	mm3/stroke	593.5	lb-ft	1500	171.1	mm3/stroke	N/A	N/A	None	None
4XDWCC	N/A	N/A	I4	4.571	Liters	170.3	horsepower	2000	129.5	mm3/stroke	593.5	lb-ft	1500	171.1	mm3/stroke	N/A	N/A	None	None
4XHSAC	N/A	N/A	I4	4.571	Liters	147.5	horsepower	2200	106.9	mm3/stroke	443.9	lb-ft	1500	133.3	mm3/stroke	N/A	N/A	None	None
4XHWAC	N/A	N/A	I4	4.571	Liters	134.1	horsepower	2000	105.7	mm3/stroke	443.9	lb-ft	1500	133.3	mm3/stroke	N/A	N/A	None	None
4XHSCC	N/A	N/A	I4	4.571	Liters	127.4	horsepower	2200	92.2	mm3/stroke	443.9	lb-ft	1500	133.3	mm3/stroke	N/A	N/A	None	None
4XHWCC	N/A	N/A	I4	4.571	Liters	127.4	horsepower	2000	100.3	mm3/stroke	443.9	lb-ft	1500	133.3	mm3/stroke	N/A	N/A	None	None
4XHYXC	N/A	N/A	I4	4.571	Liters	135.8	horsepower	1900	112.9	mm3/stroke	443.9	lb-ft	1500	133.3	mm3/stroke	N/A	N/A	None	None
4XHS1C	N/A	N/A	I4	4.571	Liters	140.8	horsepower	2200	102.2	mm3/stroke	443.9	lb-ft	1500	133.3	mm3/stroke	N/A	N/A	None	None
4XHS2CM	N/A	N/A	I4	4.571	Liters	154.2	horsepower	2200	110.5	mm3/stroke	443.9	lb-ft	1500	133.3	mm3/stroke	N/A	N/A	None	None
4XDSCCM	N/A	N/A	I4	4.571	Liters	170.3	horsepower	2200	123.3	mm3/stroke	593.5	lb-ft	1500	171.1	mm3/stroke	N/A	N/A	None	None
4XD SACM	N/A	N/A	I4	4.571	Liters	207.8	horsepower	2200	150.0	mm3/stroke	593.5	lb-ft	1500	171.1	mm3/stroke	N/A	N/A	None	None
4XDS3C	N/A	N/A	I4	4.571	Liters	154.2	horsepower	2200	109.7	mm3/stroke	593.5	lb-ft	1350	170.1	mm3/stroke	N/A	N/A	None	None