California Environmental Protection Agency		EXECUTIVE ORDER U-R-028-0775
O Air Resources Board	YANMAR CO., LTD.	New Off-Road Compression-lanition 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-14-012;

**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)
2017	HYDXL0.99NPA	0,993	Diesel	3,000
	FEATURES & EMISSION C		TYPICAL EQUIPMENT APPLIC	
	Indirect Diesel Injec	stion	Crane, Loader, Tractor, Dozer, Pump, Cor	npressor, 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	EMISSION			E	XHAUST (g/kW-I	nr)		OF	PACITY (%	5)
POWER CLASS	STANDARD CATEGORY		NMHC	NOx	NMHC+NOx	со	РМ	ACCEL	LUG	PEAK
8 ≤ kW < 19	Tier 4 Final	STD	N/A	N/A	7.5	6.6	0.40	20	15	50
		CERT			5.6	2.0	0.14	1	1	1

**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 October 2016.

Emissions Compliance, Automotive Regulations and Science Division

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				ATTRU	ATTRAMENT				10-5-16
Engine Family	Engine Family 1. Engine Code 2. Engine Model	2.Engine Model	3.BHP@RPM (SAE Gross)	4.Fuel Rate: 5.Fuel Rate:   mm/stroke @ peak HP (lbs/hr) @ peak HP (for diesel only)		6.Torque @ RPM (SEA Gross)	7.Fuel Rate: mm/stroke@peak torque	8.Fuel Rate: (lbs/hr)@peak torquei	8.Fuel Rate: 9.Emission Control (lbs/hr)@peak torqueDevice Per SAE J1930
HYDXL0.99NPA	N/A	5ENBPM	24.1/3400	19.9	11.2	41.1/2400	20.2	8.0	EM IFI
HYDXL0.99NPA	N/A	<b>5ENAAM</b>	24.1/3600	18.7	11.1	38.4/2400	18.5	7.3	EM IFI
HYDXL0.99NPA	N/A	4PNDAM	18.8/3000	17.1	8.5	36.9/1900	17.7	5.6	EM IFI
HYDXL0.99NPA	N/A	4PNNAM	16.1/2500	16.2	6.7	37.0/1800	17.7	5.3	EM IFI
HYDXL0.99NPA	N/A	4PNPAM	14.7/2400	16.2	6.4	37.0/1800	17.8	5.3	EM IFI
HYDXL0.99NPA	N/A	5ENBAM	22.8/3400	18.8	10.6	39.6/2400	19.2	7.6	EM IFI
HYDXL0.99NPA	N/A	5ENCAM	21.5/3200	18.1	9.6	39.5/2300	19.1	7.3	EM IFI