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-45-9;

IT IS ORDERED AND RESOLVED: That the following compression-ignition engine and emission control system 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) 5000				
2002	2YDXL2.78F4N	2.776	Diesel					
SPECIAL	FEATURES & EMISSION	CONTROL SYSTEMS	TYPICAL EQUIPMENT APPLICATION					
	Direct Diesel Inje	ction	Generator Set					

The engine models and codes are attached.

The following are the exhaust certification standards (STD) and certification levels (CERT) for hydrocarbons (HC), oxides of nitrogen (NOx), or non-methane hydrocarbons 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				XHAUST (g/kw-h	OPACITY (%)				
POWER CLASS	STANDARD CATEGORY		HC	NOx	NMHC+NOx	СО	PM	ACCEL	LUG	PEAK
19 ≤ KW < 37	Tier 1	STD	N/A	N/A	9.5	5.5	0.80	N/A	N/A	N/A
		CERT			8.4	3.7	0.34			

**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 November 2001.

R. B. Summerfield, Chief Mobile Source Operations Division A TTAC HMENT Engine Model Su lary Form

FO U-R-028-0070

Yanmar Diesel Engine Co.,Ltd. Manufacturer:

Nonroad Cl Engine category:

2YDXL2.78F4N EPA Engine Famly.

ΑX Mfr Family Name: **New Submission** Process Code:

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9.Emission Control Device Per SAE J1930	100	100	IAO		:							
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8.Fuel Rate: (lbs/hr)@peak torque	_	اسا	السا									
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6.Torque @ RPM (SEA Gross)	A N	¥ N	A N									
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(lbs/hr) @ peak HP (for diesels only)	17.5	17.5	17.5									
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mm/stroke @ peak HP (for diesel only)	44.3	44.3	44.3									
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3.BHP@RPM (SAE Gross)	46.8/1800	46.8/1800	46.8/1800					15.71				
HP. G	1/8	8	2									
3.BI	46	8	46									
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Vod	4TNF94-DM3	4TNF94-G1A	4TNE94-ACG									
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2.Engine Model	4.7	4	7									
1.Engine Code												
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