YANMAR DIESEL ENGINE CO., LTD.	EXECUTIVE ORDER U-R-028-0327 New Off-Road Compression-Ignition Engines
	YANMAR DIESEL ENGINE CO., LTD.

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-02-003;

**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)						
2007	7YDXL1.11V3N	1.116	Diesel	3000						
	FEATURES & EMISSION		TYPICAL EQUIPMENT APPLICATION							
	Indirect Diesel Inje	ection	Crane, Loader, Trac Pump, Compressor							

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 POWER CLASS	EMISSION			E	EXHAUST (g/kw-l	nr)		C	PACITY (	%)
	STANDARD CATEGORY		нс	NOx	NMHC+NOx	со	PM	ACCEL	LUG	PEAK
8 ≤ kW < 19	Tier 2	STD	N/A	N/A	7.5	6.6	0.80	20	15	50
		CERT			4.9	1.4	0.13	3	4	4

**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 December 2006.

Annette Hebert, Chief Mobile Source Operations Division

**Engine Model Summary Form** 

Yanmar Co., Ltd. Nonroad Cl Engine category: Manufacturer:

7YDXL1.11V3N EPA Engine Fam**i**y.

N/A Mfr Family Name: **New Submission** Process Code:

9.Emission Control Device Per SAE J1930	Jorem	1 EM	EN	EN		EM		EM		EM	EM	EM	L EME -	EM	EN	EM	EN T	EN		EN		EN	EN <sup>C</sup>	EN	- EM - E	V EN
8.Fuel Rate: (lbs/hr)@peak torque	<b>6</b> 2	7.7		72	7.2	7.2	$-\tau_2$	6,4	6.4	6.0	· 5.9	6.4		71		7,2		7.2	2	6.4		6,0		7.2	-72	<b>Z</b> L
7.Fuel Rate: mm/stroke@peak torque	25.0C	24.5	241	24.1		24.1	THE THE	24.2	242	24.0	23,7	24.2	23.9	22.7		241	24.1	24.1	241	24.2	1	24,0	23.7	24.1	24.1-	24.1
6.Torque @ RPM (SEA Gross)	212/1900	50.2/1900	49.8/1800	49.8/1800	49,8/1800	49.8/1800	- 249.8V (800	49.5/1600	49.5/1600	49.2/1500	49.0/1500	49.5/1600	49:8/1900	47.8/1900	49.8/1800	49.8/1800	49.8/1800	49.8/1800	19 8/1900	49.5/1600		49:2/1500	49:0/1500	49:8/1800	- 49.8/1800	49.8/1800
5.Fuel Rate: (lbs/ħr) @ peak HP (for diesels only)		8.6	10:4	10:0	9.6. E. T.	8.9		8.0	$-x^{2}$	7.2	6.8	8.0		= 10.4		10.0		8.9	5.4. S.4. S.	8.0		72	1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	+0.4		<b>.</b>
4.Fuel Rate: mm/stroke @ peak HP (for diesei only)	22.8	21.8	1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	22:4		21.6	213.	21.1	21.3	20.7	20.6	21.1	21.91	- 20.9		22.4	22.0	21.6		211	11. 12. 3. A. 1. 4		2	22.5	22.4	22,0
3.BHP@RPM (SAE Gross)	24.0/2808	20-1/2400	23.7/2800	22.8/2700	21.9/2600	21.1/2500	20.1/2400	19.3/2300	18,4/2200	17.4/2100	- 16.5/2000	19.3/2300	24.9/3000	23.7/3000	23,7/2800	22.8/2700	21.9/2600	21.1/2500	20.1/2400	19.3/2300	18 42200-2-	17.4/2100	16.5/2000	23.7/2800	22.8/2700	21.9/2600
2.Engine Model	STINZ6 VM	3TNV76-BX	3TNV76K	:3TNV76-L	- 3TNV76-M-	3TNV76-N	3TNV76-P	3TNV76-Q	- S-BLVVIE	3TNV76-V	3TNV76W	3TNV76-XTB	3TNV76-XJKH	3TNV76-XJKV	30B15K	3CB1-L	3CB1-M	3CB1-N	3CB1-P	3CB1-0	ACH1S	3CB1-V	3CB1-W	3D76E-5K	3D76E-5E	3D76E-5M
1.Engine Code		NA	NA.	NA	NA	NA		NA	NA STATE	NA		NA CONTRACTOR	NA A	NA		NA	NA	NA	NA	N/A	NA CTAR	NA	NIA - NIA	NA	NA	WA

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