

	<p align="center">YANMAR CO., LTD.</p>	<p align="center"><b>EXECUTIVE ORDER U-R-028-0404</b> New Off-Road Compression-Ignition Engines</p>
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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 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)
2008	8YDXL3.32M4N	3.319	Diesel	8000
SPECIAL FEATURES & EMISSION CONTROL SYSTEMS		TYPICAL EQUIPMENT APPLICATION		
Direct Diesel Injection, Electronic Control Module Exhaust Gas Recirculation		Crane, Loader, Tractor, Excavator, Dozer, 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):

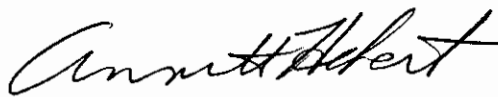
RATED POWER CLASS	EMISSION STANDARD CATEGORY		EXHAUST (g/kW-hr)					OPACITY (%)		
			HC	NOx	NMHC+NOx	CO	PM	ACCEL	LUG	PEAK
37 ≤ kW < 56	Tier 4 Interim	STD	N/A	N/A	4.7	5.0	0.30	20	15	50
		CERT	--	--	3.7	2.3	0.27	4	5	6

**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 6 day of December 2007.



Annette Hebert, Chief  
Mobile Source Operations Division

# Engine Model Summary Template

*ATTACHMENT*  
*EO# U-R-028-0404*

Engine Family	1.Engine Code	2.Engine Model	3.BHP@RPM (SAE Gross)	4.Fuel Rate: mm/stroke @ peak HP (for diesel only)	5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only)	6.Torque @ RPM (SEA Gross)	7.Fuel Rate: mm/stroke@peak torque	8.Fuel Rate: (lbs/hr)@peak torque	9.Emission Control Device Per SAE J1930
8YDXL3.32M4N	N/A	4TNV98-ZDM1	71.1/2500	49.4	27.2	179.2/1600	56.5	19.9	EMEGR DI ECM
8YDXL3.32M4N	N/A	3TNNA	70.9/2500	48.8	26.9	176.1/1600	53.2	18.8	EMEGR DI
8YDXL3.32M4N	N/A	3TNPA	68.7/2400	47.9	25.3	177.0/1550	53.4	18.2	EMEGR DI
8YDXL3.32M4N	N/A	3TNQA	66.1/2300	47.1	23.9	177.6/1500	53.5	17.7	EMEGR DI
8YDXL3.32M4N	N/A	3TNSA	63.6/2200	48.6	23.5	178.6/1400	55.1	17.0	EMEGR DI
8YDXL3.32M4N	N/A	3TNVA	61.1/2100	47.9	22.2	178.7/1350	55.1	16.4	EMEGR DI
8YDXL3.32M4N	N/A	3TNWA	58.4/2000	48.2	21.2	178.7/1300	55.1	15.8	EMEGR DI
8YDXL3.32M4N	N/A	3TNXC	60.0/2500	40.8	22.5	148.2/1600	45.3	16.0	EMEGR DI
8YDXL3.32M4N	N/A	3TNPC	58.0/2400	40.5	21.4	149.4/1550	45.1	15.4	EMEGR DI
8YDXL3.32M4N	N/A	3TNQC	55.4/2300	40.0	20.3	148.8/1500	45.0	14.9	EMEGR DI
8YDXL3.32M4N	N/A	3TNSC	53.3/2200	39.7	19.3	149.7/1400	45.3	14.0	EMEGR DI
8YDXL3.32M4N	N/A	3TNVC	51.3/2100	40.3	18.7	151.0/1350	45.3	13.5	EMEGR DI