EXECUTIVE ORDER U-R-028-0314 New Off-Road Compression-Ignition 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-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 ENGINE FAMILY		DISPLACEMENT (liters)	FUEL TYPE	USEFUL LIFE (hours)		
2006	6YDXL4.41K4T	4.412	Diesel	8000		
SPECIAL	FEATURES & EMISSION	CONTROL SYSTEMS	TYPICAL EQUIPMENT APPLICATION			
Direct Diesel Injection, Turbocharger			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 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 STANDARD CATEGORY		EXHAUST (g/kW-hr)					OPACITY (%)		
POWER CLASS			нс	NOx	NMHC+NOx	co	PM	ACCEL	LUG	PEAK
37 ≤ kW < 75	Tier 2	STD	N/A	N/A	7.5	5.0	0.40	20	15	50
		CERT			6.2	1.0	0.23	4	3	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 ______ day of December 2005.

Ropland Suspensity

Mobile Source Operations Division

Engine Model S nmary Form

U-R-028-0314 ATTACHMENT, Plot1

Yanmar Co.,Ltd. Manufacturer:

Engine category: Nonroad CI
EPA Engine Family: 6YDXL4.41K4T

Mfr Family Name: N/A

New Submission Process Code:

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ontrol E J1930	房,		A CONTRACTOR				
9.Emission Control Device Per SAE J1930	EM EM	EM	EW	Σ Ψ	Z L L	Z L	San Contraction
9.Em Device	8		×				
8.Fuel Rate: (lbs/hr)@peak torque			_		_	0	
8.Fuel Rate: 'hr)@peak tor	2 6.1 29.6	26.7	31.0	29.6	26.	24.9	
8 4/sql)							
Rate: @peak Je	99.0 84.0	86.5	88.0	84.0	86.5	80.8	
7.Fuel Rate: mm/stroke@peak torque	99.0	98	88	78	86	8	
-							
@ RPM Bross)	321,5/1200 287 6/1600	/1400	299.4/1600	287.6/1600	//1400	272,9/1400	
6.Torque @ RPM (SEA Gross)	321,5 287.6	292.7	299.4	287.6	292.7	272.5	
5.Fuel Rate: //hr) @ peak h or diesels only	38.5	35.0	38.5	37.3	35.0	36.3	
5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only)	6		8	9	e,		10 A
НР							
4.Fuel Rate: //stroke @ peak (for diesel only)	79.5	79.3	79.5	77.0	79.3	74.8	
4.Fuel Rate: mm/stroke @ peak (for diesel only)	7.9 6 79.5						
	P. 20050432592		0	(_	0	
3.BHP@RPM (SAE Gross)	4/220	99.9/2200	100.4/2200	99.9/2200	96.3/2000	93,2/2200	
3.BF (SA	100	99.	100	99	96	93	
labo	MV	s-S	:	တ	3	击	
2.Engine Model	-1901-	4TNV106T-S	4TNV106T-XT	S4D106-2S	S4D106-2W	S4D106-2XFH	
2.Eng	4TNV106T-VM 100.4/2200	4TN	4TN\	S4L	S4D	S4D	A STANSON THE
ope	100					3 V	
1.Engine Code	NA	N/A	V A/N	N/A	A/A	N/A	
1.En							