LOMBARDINI S.R.L.

EXECUTIVE ORDER U-R-027-0044New 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 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)	
2005	5LBDL2.19CHT	2.199	Diesel	5000 or 8000	
SPECIAL	FEATURES & EMISSION	CONTROL SYSTEMS	TYPICAL EQUIPMENT	APPLICATION	
lr	ndirect Diesel Injection, T	urbocharger	Pump, Compressor, Generator and Industrial Equipment		

The engine models and codes are attached.

The following are the exhaust certification standards (STD) and certification levels (CERT) for hydrocarbon (HC), 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 STANDARD CATEGORY		EXHAUST (g/kw-hr)			OPACITY (%)				
POWER CLASS			нс	NOx	NMHC+NOx	co	РМ	ACCEL	LUG	PEAK
19 <u><</u> KW<37	Tier 2	STD	N/A	N/A	7.5	5.5	0.60	20	15	50
37 <kw<75< td=""><td>Tier 2</td><td>STD</td><td>N/A</td><td>N/A</td><td>7.5</td><td>5.0</td><td>0.40</td><td>20</td><td>15</td><td>50</td></kw<75<>	Tier 2	STD	N/A	N/A	7.5	5.0	0.40	20	15	50
		CERT			6.1	0.5	0.22	16	8	36

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 January 2005.

Allen Lons, Chief

Mobile Source Operations Division

Engine Model Sur. ary Form

Lombardini S.R.L. /anufacturer:

Nonroad Cl ingine category:

5LBDL2.19CHT PA Engine Family:

CHD PLUS - TURBO

Mfr Family Name:

New Submission Process Code:

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8.Fuel Rate: 9.Emission Control lbs/hr)@peak torque	Ξ		ΙQΙ	<u>i</u> Qi	ā
8.Fuel Rate: (lbs/hr)@peak torque	28.55	26.24	24.21	30.61	FIXED SPEED
7.Fuel Rate: mm/stroke@peak torque	46.0	45.5	45.5	46.0	FIXED SPEED
6.Torque @ RPM (SEA Gross)	131.3@1700	129.8@1600	129.8@1600	131.3@1700	FIXED SPEED
5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only)	27.32	24.50	22.36	28.93	17.35
4.Fuel Rate: mm/stroke @ peak HP (for diesel only)	44.0	42.5	42.0	43.5	43.5
3.BHP@RPM (SAE Gross)	60.3@2800	56.3@2600	53.6@2400	61.6@3000	42.2@1800
2. Engine Model	LDW 2204/TB1	LDW 2204/TB2	LDW 2204/TB3	LDW 2204/T	LDW 2204/TGE
1.Engine Code					