LOMBARDINI S.R.L.

EXECUTIVE ORDER U-R-027-0063 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 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)						
2006	6LBDL1.37SFO	1.028 and 1.371	Diesel	3000 or 5000						
	FEATURES & EMISSION		TYPICAL EQUIPMENT APPLICATION							
	Indirect Diesel Inje	ection	Loader, Tractor, Dozer, 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			E	XHAUST (g/kw-l	OPACITY (%)					
POWER	STANDARD CATEGORY		HC NOx		NMHC+NOx	co	PM	ACCEL	LUG	PEAK	
8 <kw<19< th=""><th>Tier 2</th><th>STD</th><th>N/A</th><th>N/A</th><th>7.5</th><th>6.6</th><th>0.80</th><th>20</th><th>15</th><th>50</th></kw<19<>	Tier 2	STD	N/A	N/A	7.5	6.6	0.80	20	15	50	
19 <kw<37< th=""><th>Tier 2</th><th>STD</th><th colspan="2">N/A N/A</th><th>7.5</th><th>5.5</th><th>0.60</th><th>20</th><th>15</th><th>50</th></kw<37<>	Tier 2	STD	N/A N/A		7.5	5.5	0.60	20	15	50	
		CERT			4.8	2.4	0.26	2	2	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 // TH day of January 2006.

Allen Lyons, Chief

Mobile Source Operations Division

ATTACHMENT 1 OF 1

Engine Model Sur ary Form

Lombardini S.r.J. Manufacturer:

Nonroad Cl Engine category:

EPA Engine Family: 6LBDL1.37SFO

Mfr Family Name: LDW FOCS PLUS

New Submission

Process Code:

U-R-027-0063

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9.Emission Control Device Per SAE J1930	⊡	₫	Ō	₫	₫	ō	₫	₫	₫	◙	₽	₫	₫	ā	₫	₫	Ō	Ō	Ω	⊡
8.Fuel Rate: (lbs/hr)@peak torque	7.58	7.52	7.34	7.34	FIXED SPEED	FIXED SPEED	FIXED SPEED	7.12	6.44	6.44	6.44	10.25	9.30	9.30	9.30	9.22	8.38	9.17	FIXED SPEED	FIXED SPEED
7.Fuel Rate: mm/stroke@peak torque	21.7	21.5	21.0	21.0	FIXED SPEED	FIXED SPEED	FIXED SPEED	21.5	21.5	21.5	21.5	21.0	21.0	21.0	21.0	20.8	21.0	20.7	FIXED SPEED	FIXED SPEED
6.Torque @ RPM (SEA Gross)	47.2@2100	46.5@2100	45.7@2100	45.7@2100	FIXED SPEED	FIXED SPEED	FIXED SPEED	44.3@2000	44.3@1800	44.3@1800	44.3@1800	57.5@2200	59.0@2000	59.0@2000	59.0@2000	57.5@2000	54.6@1800	55.7@2000	FIXED SPEED	FIXED SPEED
5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only)	12.70	10.47	11.88	11.53	5.60	12.70	5.12	9.50	8.86	8.16	7.50	16.51	15.83	15.37	13.29	12.54	11.20	10.76	7.78	12.96
4.Fuel Rate: mm/stroke @ peak HP (for diesel only)	21.2	21.0	21.0	21.0	18.7	21.2	20.5	20.5	20.5	20.5	20.5	20.7	21.0	21.0	20.0	20.2	20.2	20.2	19.5	19.5
3.BHP@RPM (SAE Gross)	26.1@3600	23.5@3000	25.7@3400	24.8@3300	13.4@1800	26.1@3600	11.1@1500	22.1@2800	20.8@2600	18.8@2400	16.8@2200	34.2@3600	33.9@3400	32.9@3300	30.2@3000	29.1@2800	25.5@2500	24.8@2400	18.2@1800	29.5@3000
2.Engine Model	LDW 1003	LDW 1003	LDW 1003	LDW 1003	LDW 1003	LDW 1003	LDW 1003	LDW 1003	LDW 1003	LDW 1003	LDW 1003	LDW 1404	LDW 1404							
1.Engine Code																				