DEUTZ AG

EXECUTIVE ORDER U-R-013-0117 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 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)			
2004	4DZXL06.5042	6.472	Diesel	8000			
	FEATURES & EMISSION		TYPICAL EQUIPMENT				
Direct Diesel Injection			Pump				

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		EXHAUST (g/kw-hr)					OPACITY (%)		
POWER CLASS	STANDARD		НС	NOx	NMHC+NOx	СО	PM	ACCEL	LUG	PEAK
37 < kW < 75	Tier 2	STD	N/A	N/A	7.5	5.0	0.40	20	_15	50
<u> </u>	110.12	CERT	-	-	7.0	1.5	0.26	2	2	2

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 July 2003.

Allen Lyons, Chief

Mobile Source Operations Division

ENGINE MODEL SUMMARY FORM

Manufacturer: DEUTZ AG
Engine Category: Nonroad Cl
EPA Family Name: 3DZXL06.5042
Mfr. Family Name: F4L914
Process Code: New Submission

attachment pg 1 eg

Emission Control Device (SAE J1930)	EM DBL	 M	E E	 EM	 EM	EM	EM		E E
ate @ que	23.9	23.1	23.1	22.3	17.3	14.9	16.3	14.9	14.9
6. Peak Torque (Nm) 7. Peak Torque @ RPM (mm²/stroke)	72	68	69	63	69	65	69	63	63
rque (Nm) PM	1700	1700	1700	1700	1700	1500	1600	1500	1500
6. Peak Torqu @ RPM	286	276	276	267	207	202	207	202	202
5. Fuel Rate (lbs./hr) Rated Power	27.7	27.7	26.6	24.2	20.7	19.3	18.9	17.9	17.5
4. Fuel Rate @ Rated Power (mm3/stroke)	. 61	63	63	57	83	61	21	22	26
RPM	2400	2400	2200	2200	2400	2200	2300	2200	2200
3. BHP@	52	62	2.92	2	8 62	22	54	51	20
2. Engine Model 3. BHP@	F41 914	F41 914	F4! 914	F41 914	F31.914	F3L914	F3L914	F3L914	F3L914
1. Engine code	YFF 59X	CF 59T	OE 531	CE 531	CE 4AT	CF 41T	CE 40T	CE 38T	CE 37T