

 AIR RESOURCES BOARD	DEUTZ AG	EXECUTIVE ORDER U-R-013-0121 New Off-Road Compression-Ignition Engines
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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 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	4DZXLO3.1040	3.108	Diesel	8000
SPECIAL FEATURES & EMISSION CONTROL SYSTEMS			TYPICAL EQUIPMENT APPLICATION	
Direct Diesel Injection			Loader, 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):

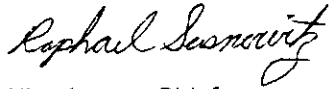
RATED POWER CLASS	EMISSION STANDARD CATEGORY		EXHAUST (g/kw-hr)					OPACITY (%)		
			HC	NOx	NMHC+NOx	CO	PM	ACCEL	LUG	PEAK
37 ≤ kW < 75	Tier 2	STD	N/A	N/A	7.5	5.0	.40	20	15	50
		CERT	-	-	6.6	1.9	.26	4	5	5

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 3rd day of October 2003.


 for Allen Lyons, Chief
 Mobile Source Operations Division

ENGINE MODEL SUMMARY FORM

Manufacturer: DEUTZ AG
 Engine Category: Nonroad CI
 EPA Family Name: 4DZXL03.1040
 Mfr. Family Name: F4L/M2011, D3D
 Process Code: New Submission

U-P-013-012-1

1. Engine code	2. Engine Model	3. BHP@ RPM	4. Fuel Rate @ Rated Power (mm ³ /stroke)	5. Fuel Rate (lbs./hr) Rated Power	6. Peak Torque (Nm) @ RPM	7. Peak Torque (mm ³ /stroke)	8. Fuel Rate (lbs./hr) @ Peak Torque	9. Emission Control Device (SAE J1930)
CE39	F4L2011	52	2300	18	180	1700	15	EM b d d F
CE39,9	F4L2011	53	2300	19	180	1700	15	EM
CE42	F4L2011	56	2300	20	190	1700	16	EM
X CE43,5	F4L2011	58	2300	20	190	1700	16	EM
CE41,8	F4L2011	56	2500	20	180	1700	15	EM
CE44	F4L2011	59	2500	21	190	1700	16	EM
CE42,9	F4L2011	57	2600	20	180	1700	15	EM
CE45,2	F4L2011	61	2600	21	190	1700	16	EM
CE45,8	F4L2011	61	2650	21	190	1700	16	EM
CE45,4	F4L2011	61	2800	21	180	1700	15	EM
CE47,8	F4L2011	64	2800	22	190	1700	16	EM
CE37	F4M2011	50	2300	17	185	1700	15	EM
CE40,4	F4M2011	54	2300	19	185	1700	15	EM
CE42,5	F4M2011	57	2300	20	190	1700	16	EM
CE44/1	F4M2011	59	2400	21	190	1700	16	EM
CE42,7	F4M2011	57	2500	20	185	1700	15	EM
CE45	F4M2011	60	2500	21	190	1700	16	EM
CE44,6	F4M2011	60	2600	21	185	1700	15	EM
CE46,5	F4M2011	62	2600	22	190	1700	16	EM
CE46,1	F4M2011	62	2800	22	185	1700	15	EM
CE48,5	F4M2011	65	2800	23	190	1700	16	EM
CE47,5	F4M2011	64	2700	22	190	1700	16	EM
CE46,5	F4L2011	62	2700	22	190	1700	16	EM
CE39,9/1	D3DCAE2	53	2300	19	180	1700	15	EM
CE43,5/1	D3DCBE2	58	2300	20	190	1700	16	EM
CE45,2/1	D3DCE2	61	2600	21	190	1700	16	EM