California Environmental Protection Agency AIR RESOURCES BOARD	DEUTZ AG	EXECUTIVE ORDER U-R-013-0123 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	4DZXL71.0021	35.4, 53.1, 70.8	Diesel	8000

SPECIAL FEATURES & EMISSION CONTROL SYSTEMS	TYPICAL EQUIPMENT APPLICATION
Direct Diesel Injection, Smoke Puff Limiter, Turbocharger, Charge Air Cooler	Generator Set

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
kW > 560	Tier 1	STD	1.3	9.2	N/A	11.4	0.54	N/A	N/A	N/A
		CERT	0.9	8.9	--	1.2	0.26	--	--	--

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 6TH day of January 2004.

Allen Lyons, Chief
Mobile Source Operations Division

Manufacturer: DEUTZ AG
Engine Category: Nonroad CI
EPA Family Name: 4DZXL71.0021
Mfr. Family Name: TBD 620
Process Code: New Submission

ENGINE MODEL SUMMARY FORM

Attachment 1 of 1
U-R-013-0123

1. Engine code	2. Engine Model	3. BHP@ KW	RPM	4. Fuel Rate @ Rated Power (mm3/stroke)	5. Fuel Rate (lbs./hr) Rated Power	6. Peak Torque @ RPM(NM)		7. Peak Torque (mm³/stroke)	8. Fuel Rate (lbs./hr) @ Peak Torque	9. Emission Control Device (SAE J1930)
n/a	TBD 620 V8	1287	1800	543	451	n/a	n/a	n/a	n/a	EM DOI, SRL, TR, CAC
n/a	TBD 620 V8	1352	1800	573	473	n/a	n/a	n/a	n/a	EM
n/a	TBD 620 V8	1416	1800	601	496	n/a	n/a	n/a	n/a	EM
n/a	TBD 620 V12	1931	1800	543	676	n/a	n/a	n/a	n/a	EM
n/a	TBD 620 V12	2028	1800	570	710	n/a	n/a	n/a	n/a	EM
n/a	TBD 620 V12	2124	1800	601	743	n/a	n/a	n/a	n/a	EM
n/a	TBD 620 V12	1965	1800	538	688	n/a	n/a	n/a	n/a	EM
n/a	TBD 620 V12	1965	1800	540	688	n/a	n/a	n/a	n/a	EM
n/a	TBD 620 V12	1965	1800	551	688	n/a	n/a	n/a	n/a	EM
n/a	TBD 620 V16	2575	1800	543	901	n/a	n/a	n/a	n/a	EM
n/a	TBD 620 V16	2703	1800	570	946	n/a	n/a	n/a	n/a	EM
n/a	TBD 620 V16	2832	1800	601	991	n/a	n/a	n/a	n/a	EM
n/a	TBD 620 V12	1931	1800	529	676	n/a	n/a	n/a	n/a	EM
n/a	TBD 620 V12	2028	1800	556	710	n/a	n/a	n/a	n/a	EM
n/a	TBD 620 V12	2124	1800	601	743	n/a	n/a	n/a	n/a	EM
n/a	TBD 620 V12	2202	1800	606	771	n/a	n/a	n/a	n/a	EM
n/a	TBD 620 V16	2575	1800	534	901	n/a	n/a	n/a	n/a	EM
n/a	TBD 620 V16	2703	1800	562	946	n/a	n/a	n/a	n/a	EM
n/a	TBD 620 V16	2832	1800	610	991	n/a	n/a	n/a	n/a	EM
n/a	TBD 620 V16	2935	1800	612	1027	n/a	n/a	n/a	n/a	EM