California Environmental Protection Agency AIR RESOURCES BOARD	DEUTZ AG	EXECUTIVE ORDER U-R-013-0144 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)
2005	5DZXL71.0021	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	0.6	8.7	--	0.6	0.19	--	--	--

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 28TH day of October 2004.

Allen Lyons, Chief
Mobile Source Operations Division

Engine Model Summary Form

Manufacturer: **DEUTZ AG**

Engine category: **Nonroad CI**

EPA Engine Family: **5DZXL71.0021**

Mfr Family Name: **TBD620V8/12/16**

Process Code: **New Submission**

Attachment 1 of 1
U-R-013-0144

1.Engine Code	2.Engine Model	3.BHP@RPM (SAE Gross)	4.Fuel Rate: mm/stroke @ peak HP (for diesel only)	5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only)	6.Torque @ RPM (SEA Gross)	7.Fuel Rate: mm/stroke@peak torque	8.Fuel Rate: (lbs/hr)@peak torque	9.Emission Control Device Per SAE J1930
DE960	TBD620V8	1287,3@1800	543	434,3	FIXED	0	0	EM, DOT, CAC, SPL, TC,
DE1008	TBD620V8	1351,7@1800	573	458,3	FIXED	0	0	EM
DE1056	TBD620V8	1416@1800	601	480,7	FIXED	0	0	EM
DE1440	TBD620V12	1931@1800	543	651,5	FIXED	0	0	EM
DE1512	TBD620V12	2027,5@1800	570	683,9	FIXED	0	0	EM
DE1584	TBD620V12	2124,1@1800	601	721,1	FIXED	0	0	EM
DE1465	TBD620V12	1964,5@1800	538	645,5	FIXED	0	0	EM
DE1465/1	TBD620V12	1964,5@1800	540	647,9	FIXED	0	0	EM
DE1465/2	TBD620V12	1964,5@1800	551	661,1	FIXED	0	0	EM
DE1920	TBD620V16	2574,7@1800	543	868,7	FIXED	0	0	EM
DE2016	TBD620V16	2703,4@1800	570	911,9	FIXED	0	0	EM
DE2112	TBD620V16	2832,1@1800	601	961,5	FIXED	0	0	EM
DE1440/1	TBD620V12	1931@1800	529	634,7	FIXED	0	0	EM
DE1512/1	TBD620V12	2027,5@1800	556	667,1	FIXED	0	0	EM
DE1584/1	TBD620V12	2124,1@1800	601	721,1	FIXED	0	0	EM
DE1642	TBD620V12	2201,9@1800	606	727,1	FIXED	0	0	EM
DE1920/1	TBD620V16	2574,7@1800	534	854,3	FIXED	0	0	EM
DE2016/1	TBD620V16	2703,4@1800	562	899,1	FIXED	0	0	EM
DE2112/1	TBD620V16	2832,1@1800	610	975,9	FIXED	0	0	EM
DE2189	TBD620V16	2935,4@1800	612	979,1	FIXED	0	0	EM