California Environmental Protection Agency AIR RESOURCES BOARD	DEUTZ AG	EXECUTIVE ORDER U-R-013-0135-1 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	4DZXL00.9024	0.916, 0.611	Diesel	3000

SPECIAL FEATURES & EMISSION CONTROL SYSTEMS	TYPICAL EQUIPMENT APPLICATION
Indirect Diesel Injection	Pump, Compressor, 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 POWER CLASS	EMISSION STANDARD CATEGORY		EXHAUST (g/kW-hr)					OPACITY (%)		
			HC	NOx	NMHC+NOx	CO	PM	ACCEL	LUG	PEAK
kW < 8	Tier 1	STD	N/A	N/A	10.5	8.0	1.0	20	15	50
8 ≤ kW < 19	Tier 1	STD	N/A	N/A	9.5	6.6	0.80	20	15	50
		CERT	-	-	5.7	2.7	0.34	2	1	6

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.

This Executive Order hereby supersedes Executive Order U-R-013-0135 dated April 15, 2004

Executed at El Monte, California on this 29TH day of April 2004.

Allen Lyons, Chief
Mobile Source Operations Division

Engine Model Summary Form

Manufacturer: **Deutz AG**

Engine category: **Nonroad CI**

EPA Engine Family: **4DZXL00.9024**

Mfr Family Name: **F3/3M1008**

Process Code: **New Submission**

Attachment 1 of 1
UR-013-0135-1

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
	F3M1008	16.9 21.4@3600	19.7	11.8	39.8@2000	20.7	6.88	IDI
	F3M1008	19.7@3000	18.7	9.33	38.4@2000	20.0	6.66	IDI
	F3M1008	18.2@2800	18.0	8.38	36.9@1800	19.5	5.84	IDI
	F3M1008	16.8@2600	18.0	7.78	36.9@1800	19.5	5.84	IDI
	F3M1008	12.1@1800	18.0	5.38	Fixed Speed	Fixed Speed	Fixed Speed	IDI
	F3M1008	21.4@3600	19.0	11.38	Fixed Speed	Fixed Speed	Fixed Speed	IDI
	F2M1008	14.2@3600	18.8	7.50	24.3@2200	19.8	4.83	IDI
	F2M1008	12.9@3000	19.0	6.33	24.3@2000	19.8	4.39	IDI
	F2M1008	11.4@2600	18.5	5.34	24.3@2000	19.8	4.39	IDI
	F2M1008	5.5 7.4@1800	18.0	3.59	Fixed Speed	Fixed Speed	Fixed Speed	IDI
	F2M1008	10.7@2400	19.0	5.05	Fixed Speed	Fixed Speed	Fixed Speed	IDI
	F2M1008	14.2@3600	18.8	7.50	Fixed Speed	Fixed Speed	Fixed Speed	IDI
	F3M1008	11.2@1800	16.7	5.0	FIXED SPEED	FIXED SPEED	FIXED SPEED	IDI
	F2M1008	10.3@2200	21.0	5.05	Fixed Speed	Fixed Speed	Fixed Speed	IDI
	F3M1008	15.6@3600	15.0	8.0	FIXED SPEED	FIXED SPEED	FIXED SPEED	IDI