California Environmental Protection Agency AIR RESOURCES BOARD	DEUTZ AG	EXECUTIVE ORDER U-R-013-0107 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)
2003	3DZXL03.1025	3.1	Diesel	8000

SPECIAL FEATURES & EMISSION CONTROL SYSTEMS	TYPICAL EQUIPMENT APPLICATION
Direct Diesel Injection, Smoke Puff Limiter	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
37 ≤ kW < 75	Tier 1	STD	N/A	9.2	N/A	N/A	N/A	20	15	50
		CERT	-	8.6	-	-	-	3	5	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.

Executed at El Monte, California on this 9TH day of December 2002.

Allen Lyons, Chief
Mobile Source Operations Division

Attachment 1 of 1

Manufacturer: DEUTZ AG
Engine Category: Nonroad CI
EPA Family Name: 3DZXL03.1025
Mfr. Family Name: D3DCCE1
Process Code: New Submission

ENGINE MODEL SUMMARY FORM

U-R-013-0107

1. Engine code	2. Engine Model	3. BHP@	RPM	4. Fuel Rate @ Rated Power (mm3/stroke)	5. Fuel Rate (lbs./hr) Rated Power	6. Peak Torque @ RPM(NM)		7. Peak Torque (mm^3/stroke)	8. Fuel Rate (lbs./hr) @ Peak Torque	9. Emission Control Device (SAE J1930)
C39,9/2	D3DCCE1	53	2300	41.5	18.7	175	1700	41.0	14.6	EM DDI, SPL
C43,5/2	D3DCDE1	58	2300	45.0	20.4	190	1700	44.5	15.9	EM
C39	F4L2011	52	2300	40.5	18.3	175	1700	41.0	14.6	EM
C39,9	F4L2011	53	2300	41.5	18.7	175	1700	41.0	14.6	EM
C41,8	F4L2011	56	2500	41.0	19.6	175	1700	41.0	14.6	EM
C42	F4L2011	56	2300	43.5	19.7	184	1700	43.0	15.4	EM
C42,9	F4L2011	57	2600	41.0	20.1	175	1700	41.0	14.6	EM
C43,5	F4L2011	58	2300	45.0	20.4	190	1700	44.5	15.9	EM
C44	F4L2011	59	2500	43.0	20.6	184	1700	43.0	15.4	EM
C45,2	F4L2011	61	2600	43.0	21.2	184	1700	43.0	15.4	EM
C45,4	F4L2011	61	2800	41.0	21.3	175	1700	41.0	14.6	EM
C45,8	F4L2011	61	2650	43.0	21.5	184	1700	43.0	15.4	EM
C47,8	F4L2011	64	2800	43.0	22.4	184	1700	43.0	15.4	EM
C37	F4M2011	50	2300	38.0	17.4	165	1700	38.5	13.8	EM
C40,4	F4M2011	54	2300	41.5	18.9	178	1700	41.5	14.9	EM
C42,5	F4M2011	57	2300	43.5	19.9	187	1700	44.0	15.6	EM
C42,7	F4M2011	57	2500	41.0	20.0	178	1700	41.5	14.9	EM
C44,6	F4M2011	60	2600	42.0	20.9	178	1700	41.5	14.9	EM
C44/1	F4M2011	59	2400	41.0	20.6	187	1700	44	15.6	EM
C45	F4M2011	60	2500	43.0	21.1	187	1700	44	15.6	EM
C46,1	F4M2011	62	2800	40.5	21.6	178	1700	41.5	14.9	EM
C46,5	F4M2011	62	2600	43.5	21.8	187	1700	44	15.6	EM
C48,5	F4M2011	65	2800	43.0	22.7	187	1700	44	15.6	EM