California Environmental Protection Agency AIR RESOURCES BOARD	DEUTZ AG	EXECUTIVE ORDER U-R-013-0069 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-45-9;

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)
2002	2DZXL03.8016	2.8, 3.8	Diesel	5000

SPECIAL FEATURES & EMISSION CONTROL SYSTEMS	TYPICAL EQUIPMENT APPLICATION
Direct Diesel Injection, Smoke Puff Limiter	Pump, Compressor, Generator Set, 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
19≤kW<37	Tier 1	STD	N/A	N/A	9.5	5.5	0.80	20	15	50
		CERT	-	-	9.1	3.5	0.57	11	9	16

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 February 2002.

Allen Lyons, Chief
New Vehicle/Engine Programs Branch

IDH U-R-013-0069
Attachment 1&1

Manufacturer: DEUTZ AG
Engine category: Nonroad CI
EPA Engine Family: 2DZXL03.8016

Engine Model and Part Number Summary Form

Engine code	Engine Mode	BHP	BkW	Rated Power Engine Speed	Injection rate at rated power ±6mm³	Peak torque ± 5%	Speed at peak torque ± 100 rpm	Injection rate at peak torque ±4mm³	Fuel injection pump	Fuel injector	Injection timing (-1°)
		HP	kW	rpm	mm³/ stroke	Nm	rpm	mm³/ stroke	description	description	°btdc
C36/2	F3L912	48	36.0	2500	54	164	1500	57	PES3A95D410/3RS2939	DLLA147P875	12
C36	F3L912	48	36.0	2300	56	172	1500	57	PES3A95D410/3RS2939	DLLA147P875	10.5
C35	F3L912	47	35.0	2300	54	164	1500	57	PES3A95D410/3RS2939	DLLA147P875	10.5
C36/1	F3L912	48	36.0	2150	57.5	180	1500	57	PES3A95D410/3RS2939	DLLA147P875	10.5
C35/1	F3L912	47	35.0	2150	55.5	172	1500	57	PES3A95D410/3RS2939	DLLA147P875	10.5
C32	F3L912	43	32.0	2150	50.5	164	1500	57	PES3A95D410/3RS2939	DLLA147P875	10.5
C34	F3L912	46	34.0	2000	56.5	180	1500	57	PES3A95D410/3RS2939	DLLA147P875	10
C32/1	F3L912	43	32.0	2000	52.5	172	1500	57	PES3A95D410/3RS2939	DLLA147P875	10
C30	F3L912	40	30.0	2000	49.5	164	1500	57	PES3A95D410/3RS2939	DLLA147P875	10
D33	F3L912	44	33.0	1800	60	n.a.	n.a.	n.a.	PES3A95D410/3RS2953	DLLA147P854	9
D32	F3L912	43	32.0	1800	56	n.a.	n.a.	n.a.	PES3A95D410/3RS2953	DLLA147P854	9
D31	F3L912	42	31.0	1800	52.5	n.a.	n.a.	n.a.	PES3A95D410/3RS2953	DLLA147P854	9
D30,5	F3L912	41	30.5	1800	51	n.a.	n.a.	n.a.	PES3A95D410/3RS2953	DLLA147P854	9
D29	F3L912	39	29.0	1800	49	n.a.	n.a.	n.a.	PES3A95D410/3RS2953	DLLA147P854	9
D28	F3L912	38	28.0	1800	47	n.a.	n.a.	n.a.	PES3A95D410/3RS2953	DLLA147P854	9
D27	F3L912	36	27.0	1500	56	n.a.	n.a.	n.a.	PES3A95D410/3RS2953	DLLA147P854	9
D25	F3L912	34	25.0	1500	52	n.a.	n.a.	n.a.	PES3A95D410/3RS2953	DLLA147P854	9
D36/1	F4L912	48	36.0	1800	44.5	n.a.	n.a.	n.a.	PES4A95D410/3RS2932	DLLA147P854	10
D29,5	F4L912	40	29.5	1800	37	n.a.	n.a.	n.a.	PES4A95D410/3RS2933	DLLA147P854	10
D35	F3L913	47	35.0	1800	60	n.a.	n.a.	n.a.	PES3A95D410/3RS2953	DLLA147P854	11