California Environmental Protection Agency AIR RESOURCES BOARD	DEUTZ AG	EXECUTIVE ORDER U-R-013-0074 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	2DZXL02.7015	2.7	Diesel	8000

SPECIAL FEATURES & EMISSION CONTROL SYSTEMS	TYPICAL EQUIPMENT APPLICATION
Direct Diesel Injection, Smoke Puff LImiter	Tractor, Compressor, Pump, 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	-	7.9	-	-	-	2	3	4

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

EO# U-R-01-0074
Attachment 181

Manufacturer: DEUTZ AG
Engine category: Nonroad CI
EPA Engine Family: 2DZXL02.7015

Engine Model and Part Number Summary Form

Engine code	Engine Model	BHP	BkW	Rated Power Engine Speed	Injection rate at rated power ±6mm³	Peak torque ± 5%	Speed at peak torque ± 200 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
C44/2	F4L1011F	59	44.0	3300	37.0	162	1800	40	PFE1A90S3001	DSLA144P860	6
C44/3	F4L1011F	59	44.0	3100	38.0	162	1800	40	PFE1A90S3001	DSLA144P860	6
C44/1	F4L1011F	59	44.0	3000	39.0	162	1800	40	PFE1A90S3001	DSLA144P860	6
C42/2	F4L1011F	56	42.0	3000	36.0	153	1800	36	PFE1A80S3010	DSLA144P547	7
C42/3	F4L1011F	56	42.0	2800	38.0	162	1800	39.5	PFE1A90S3001	DSLA144P860	6
C40/4	F4L1011F	54	40.0	2800	35.5	153	1800	36	PFE1A80S3010	DSLA144P547	7
C41	F4L1011F	55	41.0	2700	37.5	162	1800	39.5	PFE1A90S3001	DSLA144P860	6
C40,5	F4L1011F	54	40.5	2650	37.5	162	1800	39.5	PFE1A90S3001	DSLA144P860	6
C38,5	F4L1011F	52	38.5	2650	35.5	153	1800	36	PFE1A80S3010	DSLA144P547	7
C40/5	F4L1011F	54	40.0	2600	37.5	162	1800	39.5	PFE1A90S3001	DSLA144P860	6
C38/2	F4L1011F	51	38.0	2600	35.5	153	1800	36	PFE1A80S3010	DSLA144P547	7
C39/4	F4L1011F	52	39.0	2550	37.5	160	1800	39.5	PFE1A90S3001	DSLA144P860	6
C39/3	F4L1011F	52	39.0	2500	38.0	162	1800	40	PFE1A90S3001	DSLA144P860	6
C38	F4L1011F	51	38.0	2500	36.5	157	1800	37	PFE1A90S3001	DSLA144P860	6
C37/2	F4L1011F	50	37.0	2500	35.5	153	1800	36	PFE1A80S3010	DSLA144P547	7
C38/3	F4L1011F	51	38.0	2400	39.0	162	1800	40	PFE1A90S3001	DSLA144P860	6
C37/3	F4L1011F	50	37.0	2300	38.0	161	1800	40	PFE1A90S3001	DSLA144P860	6