State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER U-R-13-1

Relating to Certification of New Heavy-Duty Off-Road Equipment Engines

DEUTZ MOTOR GmbH

Pursuant to the authority vested in the Air Resources Board by Sections 43000.5, 43013 and 43018 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 Deutz Motor GmbH 1996 model-year engine, with rated power between 175 and 750 horsepower, and exhaust emission control systems are certified as described below for use in heavy-duty off-road equipment:

Typical Equipment Usage: Gensets

Fuel Type: Diesel

Engine Family	Liters	(Cubic Inches)	Exhaust Emission Control Systems and Special Features
TDZ7.1R6DARB	7.1	(436)	Turbocharger Charge Air Cooler Smoke Puff Limiter

Engine models and codes are listed on attachments. Production engines shall be in all material respects the same as those for which certification is granted.

The total hydrocarbons (THC), carbon monoxide (CO), nitrogen oxides (NOx), and particulate matters (PM) certification exhaust emission standards, in grams per brake horsepower-hour (g/bhp-hr), and the opacity of smoke emission standards, in percent (%), during acceleration (Accel), lugging (Lug), and peak (Peak) modes, for this engine family are (Title 13, California Code of Regulations, Section 2423):

Exhaust Emissions (g/bhp-hr)				Smoke Opacity (%)		
THC	CO	NOx	PM	Accel	Lug	Peak
1.0	8.5	6.9	0.4	20	15	50

The THC, CO, NOx and PM exhaust emission certification values, in g/bhp-hr, and the opacity of smoke emission certification values, in percent (%), for this engine family are:

	Exhaust Emission (g/bhp-hr)				Smoke Opacity (%)		
Engine Family	THC	CO	NOx	PM	Accel	Lug	Peak
TDZ7.1R6DARB	0.3	0.8	6.3	0.1	6	4	10

BE IT FURTHER RESOLVED: That the listed engine models comply with the "Exhaust Emission Standards and Test Procedures--Heavy-Duty Off-Road Diesel Cycle Engines" (Title 13, California Code of Regulations, Section 2423) for the aforementioned model year.

BE IT FURTHER RESOLVED: That the listed engine models also comply with the "Emission Control Labels--1996 and Later Heavy-Duty Off-Road Diesel Cycle Engines" (Title 13, California Code of Regulations, Section 2424) for the aforementioned model year.

BE IT FURTHER RESOLVED: That for the listed engine models, the manufacturer has submitted the materials to demonstrate certification compliance with the Board's emission control system warranty provisions (Title 13, California Code of Regulations, Section 2425 et seq.).

Executive Order U-R-4-1 dated May 1, 1996, is hereby cancelled and replaced by Executive Order U-R-13-1.

Engines certified under this Executive Order must conform to all applicable California emission regulations.

Executed at El Monte, California this 27th day of June 1996.

R. B. Summerfield
Assistant Division Chief
Mobile Source Division

List of emission-

Engine type	Engine code	Nominal power ± 5%	Nominal speed ± 50 rpm	Mean effective pressure	Injection rate at nom. speed, ±4mm³	Nominal torque ± 5%	Speed at nom. torque	Low idle - 50rpm + 100rpm	High idle (+50 - +200 rpm, dep. on engine applic.)
		kW	rpm	bar	mm³/stroke	Nm	rpm	rpm	rpm
BF 6M 1013 E	C141/1	141	2500	9.47	86	702	1500$^{\pm 100}$	700	2600
BF 6M 1013 E	C145	145	2300	10.59	94	702	1400$^{\pm 100}$	700	2400
BF 6M 1013 E	C137	137	2300	10.00	89	667	1400$^{\pm 100}$	700	2400
BF 6M 1013 E	C130	130	2300	9.49	84	632	1400$^{\pm 100}$	700	2400
BF 6M 1013 E	C139	139	2200	10.61	93	702	1400$^{\pm 100}$	700	2300
BF 6M 1013 E	C132	132	2200	10.08	89	667	1400$^{\pm 100}$	700	2300
BF 6M 1013 E	C134	134	2100	10.72	93	702	1400$^{\pm 100}$	700	2180
BF 6M 1013 E	C128	128	2100	10.24	89	667	1400$^{\pm 100}$	700	2180
BF 6M 1013	C140	140	2500	9.40	86	697	1500$^{\pm 100}$	700	2600
BF 6M 1013	C141	141	2300	10.29	94	697	1400$^{\pm 100}$	700	2400
BF 6M 1013	C133	133	2300	9.71	89	662	1400$^{\pm 100}$	700	2400
BF 6M 1013	C136	136	2200	10.38	93	697	1400$^{\pm 100}$	700	2300
BF 6M 1013	C129	129	2200	9.85	89	662	1400$^{\pm 100}$	700	2300
BF 6M 1013	C131	131	2100	10.48	93	697	1400$^{\pm 100}$	700	2180
BF 6M 1013 E	D145	145	2400	10.15	91	n.a.	n.a.	n.a.	n.a.
BF 6M 1013 E	D141	141	2400	9.87	89	n.a.	n.a.	n.a.	n.a.
BF 6M 1013 E	D128	128	2400	8.96	81	n.a.	n.a.	n.a.	n.a.
BF 6M 1013 E	D135	135	2000	11.34	97	n.a.	n.a.	n.a.	n.a.
BF 6M 1013 E	D130	130	1846	11.83	101	n.a.	n.a.	n.a.	n.a.
BF 6M 1013 E	D134	134	1800	12.50	106	n.a.	n.a.	n.a.	n.a.
BF 6M 1013	D137	137	2400	9.59	89	n.a.	n.a.	n.a.	n.a.
[redacted] 1013	D133	133	2000	11.17	97	n.a.	n.a.	n.a.	n.a.
[redacted] 1013	D128	128	1846	11.64	101	n.a.	n.a.	n.a.	n.a.