

 AIR RESOURCES BOARD	DEUTZ AG	EXECUTIVE ORDER U-R-013-0122
		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	4DZXL03.1041	1.555, 2.332, 3.109	Diesel	5000
SPECIAL FEATURES & EMISSION CONTROL SYSTEMS			TYPICAL EQUIPMENT APPLICATION	
Direct Diesel Injection			Loader, Pump	

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 2	STD	N/A	N/A	7.5	5.5	.60	20	15	50
		CERT	-	-	6.4	2.7	.21	2	3	3

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 12TH day of November 2003.


 Allen Lyons, Chief
 Mobile Source Operations Division

Attachment 1 of 2

U-R-013-0122

ENGINE MODEL SUMMARY FORM

Manufacturer: DEUTZ AG
 Engine Category: Nonroad CI
 EPA Family Name: #DZXLO3.1041
 Mfr. Family Name: F2/3/4L/M2011
 Process Code: New Submission

1. Engine code	2. Engine Model	3. BHP@	RPM	4. Fuel Rate @ Rated Power (mm ³ /stroke)	5. Fuel Rate (lbs./hr) Rated Power	6. Peak Torque (Nm) @ RPM	7. Peak Torque (mm ³ /stroke)	8. Fuel Rate (lbs./hr) @ Peak Torque	9. Emission Control Device (SAE J1930)
DE15,8	F2M2011	20	1800	40.0	7	n.a.	n.a.	n.a.	EM
CE20A	F2M2011	27	2300	43.0	9	88	1700	43.0	EM
CE21A	F2M2011	28	2500	42.0	10	88	1700	43.0	EM
CE21,7A	F2M2011	29	2600	43.0	10	88	1700	43.0	EM
CE21,1A	F2M2011	28	2300	45.0	10	93	1700	47.0	EM
CE22,2A	F2M2011	30	2500	46.0	10	93	1700	47.0	EM
CE23A	F2M2011	31	2800	45.0	11	88	1700	43.0	EM
CE23,1A	F2M2011	31	2600	46.5	11	93	1700	47.0	EM
CE23,5A	F2M2011	31	2800	48.0	11	93	1700	47.0	EM
CE23,3A	F2M2011	31	2750	46.0	11	93	1700	47.0	EM
CE21,6A	F2M2011	29	2400	44.0	10	93	1700	47.0	EM
DE15,1	F2L2011	20	1800	39.0	7	n.a.	n.a.	n.a.	EM
CE19,1A	F2L2011	26	2300	40.5	9	86	1700	42.0	EM
CE20,1A	F2L2011	27	2300	43.0	9	90	1700	44.0	EM
CE20,2A	F2L2011	27	2500	40.5	9	86	1700	42.0	EM
CE20,9A	F2L2011	28	2600	41.0	10	86	1700	42.0	EM
CE21,3A	F2L2011	29	2500	43.0	10	90	1700	44.0	EM
CE21,8A	F2L2011	29	2800	41.0	10	86	1700	42.0	EM
CE22,2/A	F2L2011	29	2600	44.0	10	90	1700	44.0	EM
CE22,5A	F2L2011	30	2800	43.0	11	88	1700	43.0	EM
DE20,9	F3L2011	28	1800	37.0	10	n.a.	n.a.	n.a.	EM
DE23,8	F3L2011	32	1800	43.0	11	n.a.	n.a.	n.a.	EM
DE26,5/1	F3L2011	36	1800	47.5	12	n.a.	n.a.	n.a.	EM
DE21,5	F3M2011	28	1800	37.0	10	n.a.	n.a.	n.a.	EM
DE24,5	F3M2011	32	1800	43.0	11	n.a.	n.a.	n.a.	EM
CE29,3A	F3L2011	39	2300	42.0	14	130	1700	43.5	EM
CE30,9A	F3L2011	41	2300	43.0	14	137	1700	46.0	EM
CE31,1A	F3L2011	42	2500	42.0	15	130	1700	43.5	EM
CE32,2A	F3L2011	43	2600	42.0	15	130	1700	43.5	EM
CE32,8/A	F3L2011	44	2500	44.0	15	137	1700	46.0	EM
CE33,9A	F3L2011	45	2600	44.0	16	137	1700	46.0	EM
CE34A	F3L2011	46	2800	42.0	16	130	1700	43.5	EM
CE35,8A	F3L2011	48	2800	44.0	17	137	1700	45.5	EM
CE29,9A	F3M2011	40	2300	43.0	14	133	1700	44.5	EM

Attachment 2 of 2

U-R-013-0122

ENGINE MODEL SUMMARY FORM

Manufacturer: DEUTZ AG
 Engine Category: Nonroad CI
 EPA Family Name: ~~4~~PDZXL03.1041
 Mfr. Family Name: F23/4L/M2011
 Process Code: New Submission

1. Engine code	2. Engine Model	3. BHP@ RPM	4. Fuel Rate @ Rated Power (mm ³ /stroke)	5. Fuel Rate (lbs./hr) Rated Power	6. Peak Torque (Nm) @ RPM	7. Peak Torque (mm ³ /stroke)	8. Fuel Rate (lbs./hr) @ Peak Torque	9. Emission Control Device (SAE J1930)
CE31,5A	F3M2011	42 2300	45.0	15	137 1700	45.5	11	EM
CE31,8A	F3M2011	43 2500	43.0	15	133 1700	44.5	11	EM
CE32,5/A	F3M2011	44 2400	44.0	15	140 1700	46.0	12	EM
CE32,8A	F3M2011	44 2600	43.0	15	133 1700	44.5	11	EM
CE33,5A	F3M2011	45 2500	45.0	16	140 1700	46.0	12	EM
CE34,5A	F3M2011	46 2600	45.0	16	140 1700	46.0	12	EM
CE34,7A	F3M2011	46 2800	43.0	16	133 1700	44.5	11	EM
CE36,5A	F3M2011	49 2800	45.0	17	140 1700	46.0	12	EM
CE35,5A	F3M2011	48 2700	44.0	17	140 1700	46.0	12	EM
DE28,7	F4L2011	38 1800	36.0	13	n.a.	n.a.	n.a.	EM
DE34,5	F4L2011	46 1800	44.5	16	n.a.	n.a.	n.a.	EM
DE29,4	F4M2011	38 1800	36.5	13	n.a.	n.a.	n.a.	EM
DE35,2	F4M2011	46 1800	45.0	16	n.a.	n.a.	n.a.	EM
DE36	F4L2011	48 1800	47.0	17	n.a.	n.a.	n.a.	EM