California Environmental Protection Agency AIR RESOURCES BOARD	DEUTZ AG	EXECUTIVE ORDER U-R-013-0091 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	3DZXL04.8006	3.2, 4.8	Diesel	8000

SPECIAL FEATURES & EMISSION CONTROL SYSTEMS	TYPICAL EQUIPMENT APPLICATION
Direct Diesel Injection, Smoke Puff Limiter, Turbocharger, Charge Air Cooler	Pump, Generator Set

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	-	8.4	-	-	-	3	3	5

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 2

U-R-013-0091

Manufacturer: DEUTZ AG
Engine Category: Nonroad CI
EPA Family Name: 3DZXL04.8006
Mfr. Family Name: BF6M1012C
Process Code: New Submission

ENGINE MODEL SUMMARY FORM

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 (mm³/stroke)	8. Fuel Rate (lbs./hr) @ Peak Torque	9. Emission Control Device (SAE J1930)
C60	BF4M1012C	80	2000	66.0	28.1	319	1500	70.0	23.5	TC,CAC,EM DDI, SPL
C60/1	BF4M1012C	80	2300	61.0	28.1	324	1600	74.0	25.5	EM
C63	BF4M1012C	84	2100	65.0	29.5	319	1500	70.0	23.5	EM
C64	BF4M1012C	86	2200	64.0	30.0	319	1500	70.0	23.5	EM
C64/1	BF4M1012C	86	2000	71.0	30.0	338	1500	74.0	24.9	EM
C65/3	BF4M1012C	87	2300	66.0	30.5	351	1600	78.0	27.6	EM
C66	BF4M1012C	88	2300	67.0	31.0	319	1500	74.0	23.5	EM
C66/1	BF4M1012C	88	2100	69.0	31.0	338	1500	74.0	24.9	EM
C67	BF4M1012C	90	2000	74.0	31.4	357	1500	78.0	26.3	EM
C68	BF4M1012C	91	2200	68.0	31.9	338	1500	74.0	24.9	EM
C69	BF4M1012C	92	2300	67.0	32.4	338	1500	74.0	24.9	EM
C69/1	BF4M1012C	92	2100	71.0	32.4	357	1500	78.0	26.3	EM
C70	BF4M1012C	94	2500	65.0	32.8	319	1500	70.0	23.5	EM
C71	BF4M1012C	95	2000	75.0	33.3	376	1500	82.0	27.7	EM
C72	BF4M1012C	96	2200	72.0	33.8	357	1500	78.0	26.3	EM
C72/2	BF4M1012C	96	2200	72.0	33.8	357	1500	78.0	26.3	EM
D59	BF4M1012C	79 58.9	1800	72.0	27.7	N/A	N/A	N/A	N/A	EM
D62	BF4M1012C	83	1800	74.0	29.1	N/A	N/A	N/A	N/A	EM
D64	BF4M1012C	86	1846	74.0	30.0	N/A	N/A	N/A	N/A	EM
D65	BF4M1012C	87	1800	77.0	30.5	N/A	N/A	N/A	N/A	EM
D66	BF4M1012C	88	2000	73.0	31.0	N/A	N/A	N/A	N/A	EM
D70	BF4M1012C	94	1846	82.0	32.8	N/A	N/A	N/A	N/A	EM
D72	BF4M1012C	96	2400	68.0	33.8	N/A	N/A	N/A	N/A	EM
D73	BF4M1012C	98	2000	79.0	34.2	N/A	N/A	N/A	N/A	EM
C60/1	BF4M1012EC	80	2300	61.5	28.1	321	1500	70.0	23.7	EM
C61	BF4M1012EC	82	2000	66.0	28.6	321	1500	70.0	23.7	EM
C64/2	BF4M1012EC	86	2100	65.0	30.0	321	1500	70.0	23.7	EM
C65	BF4M1012EC	87	2200	64.0	30.5	321	1500	70.0	23.7	EM
C65/1	BF4M1012EC	87	2000	71.0	30.5	340	1500	74.0	25.1	EM
C65/2	BF4M1012EC	87	1900	73.0	30.5	359	1500	78.0	26.5	EM
C65/3	BF4M1012EC	87	2300	65.0	30.5	340	1500	74.0	25.1	EM
C65/3	BF4M1012EC	87	2300	65.0	30.5	340	1500	74.0	25.1	EM
C67/1	BF4M1012EC	90	2300	65.0	31.4	321	1500	70.0	23.7	EM
C67/2	BF4M1012EC	90	2100	69.0	31.4	340	1500	74.0	25.1	EM

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Engine Category: Nonroad CI
EPA Family Name: 3DZXL04.8006
Mfr. Family Name: BF6M1012C
Process Code: New Submission

ENGINE MODEL SUMMARY FORM

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 (mm³/stroke)	8. Fuel Rate (lbs./hr) @ Peak Torque	9. Emission Control Device (SAE J1930)
C68/1	BF4M1012EC	91	2000	74.0	31.9	359	1500	78.0	26.5	EM TC,CAC, DDI, SIL
C69/2	BF4M1012EC	92	2200	68.0	32.4	340	1500	74.0	25.1	EM
C70/1	BF4M1012EC	94	2300	67.0	32.8	340	1500	74.0	25.1	EM
C70/2	BF4M1012EC	94	2100	71.0	32.8	359	1500	78.0	26.5	EM
C72/1	BF4M1012EC	96	2500	65.0	33.8	321	1600	70.0	25.2	EM
C73/1	BF4M1012EC	98	2200	72.0	34.2	359	1500	78.0	26.5	EM
C74/2	BF4M1012EC	99	2100	75.0	34.7	378	1500	82.0	27.9	EM
C74/3	BF4M1012EC	99	2300	71.0	34.7	359	1500	78.0	26.5	EM
D60	BF4M1012EC	80	1800	72.0	28.1	N/A	N/A	N/A	N/A	EM
D63	BF4M1012EC	84	1800	74.0	29.5	N/A	N/A	N/A	N/A	EM
D65/1	BF4M1012EC	87	1846	74.0	30.5	N/A	N/A	N/A	N/A	EM
D66/1	BF4M1012EC	88	1800	77.0	31.0	N/A	N/A	N/A	N/A	EM
D67	BF4M1012EC	90	1800	80.0	31.4	N/A	N/A	N/A	N/A	EM
D67/1	BF4M1012EC	90	2000	73.0	31.4	N/A	N/A	N/A	N/A	EM
D70/1	BF4M1012EC	94	1800	82.0	32.8	N/A	N/A	N/A	N/A	EM
D71	BF4M1012EC	95	1846	82.0	33.3	N/A	N/A	N/A	N/A	EM
D74	BF4M1012EC	99	2400	68.0	34.7	N/A	N/A	N/A	N/A	EM
D74/1	BF4M1012EC	99	2000	79.0	34.7	N/A	N/A	N/A	N/A	EM
D74/2	BF4M1012EC	99	1800	87.0	34.7	N/A	N/A	N/A	N/A	EM
C74,9	BF4M1012EC	100	2500	67.6	35.1	378	1500	82.0	27.9	EM
C73,4	BF4M1012C	98	2300	72.0	34.4	357	1500	78.0	26.3	EM