

	<p style="text-align: center;">DEUTZ AG</p>	<p style="text-align: center;">EXECUTIVE ORDER U-R-013-0092 New Off-Road Compression-Ignition Engines</p>
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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	3DZXLO4.8007	3.2, 4.8	Diesel	8000
SPECIAL FEATURES & EMISSION CONTROL SYSTEMS			TYPICAL EQUIPMENT APPLICATION	
Direct Diesel Injection, Smoke Puff Limiter, Turbocharger			Pump, 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
37 ≤ kW < 75	Tier 1	STD	N/A	9.2	N/A	N/A	N/A	20	15	50
		CERT	-	8.8	-	-	-	3	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 9th day of December 2002.



Allen Lyons, Chief
Mobile Source Operations Division

Attachment 1 of 3

U-R-013-0092

Manufacturer: DEUTZAG
 Engine Category: Nonroad CI
 EPA Family Name: 3DZX104.8007
 Mfr. Family Name: BF4M1012
 Process Code: New Submission

ENGINE MODEL SUMMARY FORM

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 @ RPM(NM)	7. Peak Torque (mm ³ /stroke)	8. Fuel Rate (lbs./hr) @ Peak Torque	9. Emission Control Device (SAE J1930)
C46	BF4M1012	62	2100	53.0	21.6	252	58.0	18.6	EM 001, TC, 5 th PL
C47	BF4M1012	63	2000	54.0	22.0	252	58.0	18.6	EM
C49	BF4M1012	66	2100	53.0	23.0	252	58.0	18.6	EM
C50	BF4M1012	67	2000	57.0	23.5	266	61.0	19.6	EM
C51	BF4M1012	68	2200	53.0	23.9	252	58.0	18.6	EM
C52	BF4M1012	70	2300	53.0	24.4	252	58.0	18.6	EM
C52/1	BF4M1012	70	2100	56.0	24.4	266	61.0	19.6	EM
C52/2	BF4M1012	70	2000	59.0	24.4	284	66.0	20.9	EM
C53	BF4M1012	71	2200	55.0	24.9	266	61.0	19.6	EM
C54	BF4M1012	72	2100	58.0	25.3	284	66.0	20.9	EM
C55	BF4M1012	74	2500	54.0	25.8	252	58.0	18.6	EM
C55/1	BF4M1012	74	2300	56.0	25.8	266	61.0	19.6	EM
C55/2	BF4M1012	74	2000	62.0	25.8	298	70.0	22.0	EM
C56	BF4M1012	75	2200	58.0	26.3	284	66.0	20.9	EM
C57	BF4M1012	76	2100	62.0	26.7	298	70.0	22.0	EM
C58/1	BF4M1012	78	2300	59.0	27.2	284	66.0	20.9	EM
C58/2	BF4M1012	78	2500	57.0	27.2	266	61.0	19.6	EM
C59	BF4M1012	79	2200	62.0	27.7	298	70.0	22.0	EM
C61	BF4M1012	82	2300	62.0	28.6	298	70.0	22.0	EM
C62	BF4M1012	83	2500	61.0	29.1	284	66.0	20.9	EM
C63/1	BF4M1012	84	2400	64.0	29.5	298	70.0	22.0	EM
C65	BF4M1012	87	2500	64.0	30.5	298	70.0	22.0	EM
D47	BF4M1012	63	1800	59.0	22.0	N/A	N/A	N/A	EM
D49	BF4M1012	66	1800	61.0	23.0	N/A	N/A	N/A	EM
D50	BF4M1012	67	1846	61.0	23.5	N/A	N/A	N/A	EM
D52	BF4M1012	70	1800	65.0	24.4	N/A	N/A	N/A	EM
D53	BF4M1012	71	2000	60.0	24.9	N/A	N/A	N/A	EM
D55	BF4M1012	74	1846	67.0	25.8	N/A	N/A	N/A	EM
D57	BF4M1012	76	2400	60.0	26.7	N/A	N/A	N/A	EM
D58	BF4M1012	78	2000	65.0	27.2	N/A	N/A	N/A	EM
D63	BF4M1012	84	2400	66.0	29.5	N/A	N/A	N/A	EM
C48	BF4M1012E	64	2000	54.0	22.5	254	58.0	18.7	EM

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Manufacturer: DEUTZ AG
 Engine Category: Nonroad CI
 EPA Family Name: 3DZXLO4.8007
 Mfr. Family Name: BF4M1012
 Process Code: New Submission

ENGINE MODEL SUMMARY FORM

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 @ RPM(NM)	7. Peak Torque (mm ³ /stroke)	8. Fuel Rate (lbs./hr) @ Peak Torque	9. Emission Control Device (SAE J1930)
C50/1	BF4M1012E	67	2100	53.0	23.5	268	58.0	19.8	EM 603, 501, 7C
C51/1	BF4M1012E	68	2000	57.0	23.9	268	61.0	19.8	EM
C52/3	BF4M1012E	70	2200	53.0	24.4	254	58.0	18.7	EM
C53/2	BF4M1012E	71	2100	56.0	24.9	286	61.0	21.1	EM
C53/3	BF4M1012E	71	2000	59.0	24.9	286	66.0	21.1	EM
C53/4	BF4M1012E	71	2200	55.0	24.9	268	61.0	19.8	EM
C54/1	BF4M1012E	72	2200	55.0	25.3	268	61.0	19.8	EM
C55/5	BF4M1012E	74	2100	58.0	25.8	286	66.0	21.1	EM
C55/6	BF4M1012E	74	2300	55.0	25.8	292	66.0	23.0	EM
C56/1	BF4M1012E	75	2300	54.0	26.3	254	58.0	20.0	EM
C56/2	BF4M1012E	75	2300	56.0	26.3	268	61.0	19.8	EM
C57/1	BF4M1012E	76	2200	58.0	26.7	286	66.0	21.1	EM
C58	BF4M1012E	78	2100	62.0	27.2	300	70.0	22.1	EM
C58/3	BF4M1012E	78	2300	58.0	27.2	286	66.0	21.1	EM
C59,5	BF4M1012E	80	2300	62.0	27.9	286	66.0	21.1	EM
C59/1	BF4M1012E	79	2500	57.0	27.7	268	61.0	19.8	EM
C59/2	BF4M1012E	79	2300	59.0	27.7	286	66.0	21.1	EM
C60	BF4M1012E	80	2200	62.0	28.1	300	70.0	22.1	EM
C60/1	BF4M1012E	80	2200	62.0	28.1	300	70.0	22.1	EM
C60/2	BF4M1012E	80	2200	62.0	28.1	300	70.0	22.1	EM
C62/1	BF4M1012E	83	2300	62.0	29.1	300	70.0	22.1	EM
C62/2	BF4M1012E	83	2300	62.0	29.1	324	75.0	23.9	EM
C62/3	BF4M1012E	83	2300	62.0	29.1	324	75.0	23.9	EM
C63	BF4M1012E	84	2500	61.0	29.5	286	66.0	21.1	EM
C66	BF4M1012E	88	2500	64.0	31.0	300	70.0	22.1-25.0	EM
D48/1	BF4M1012E	64	1800	60.0	22.5	N/A	N/A	N/A	EM
D50/2	BF4M1012E	67	1800	63.0	23.5	N/A	N/A	N/A	EM
D51	BF4M1012E	68	1846	62.0	23.9	N/A	N/A	N/A	EM
D53/2	BF4M1012E	71	1800	66.0	24.9	N/A	N/A	N/A	EM
D54/1	BF4M1012E	72	2000	61.0	25.3	N/A	N/A	N/A	EM
D54/2	BF4M1012E	72	1800	68.0	25.3	N/A	N/A	N/A	EM

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 Mfr. Family Name: BF4M1012
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ENGINE MODEL SUMMARY FORM

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D56/1	BF4M1012E	75	1846	68.0	26.3	N/A	N/A	N/A	EM	
D56/2	BF4M1012E	75	1800	70.0	26.3	N/A	N/A	N/A	EM	
D58/1	BF4M1012E	78	2400	61.0	27.2	N/A	N/A	N/A	EM	
D59/1	BF4M1012E	79	2000	67.0	27.7	N/A	N/A	N/A	EM	
D59/2	BF4M1012E	79	1800	74.0	27.7	N/A	N/A	N/A	EM	
D59/3	BF4M1012E	79	1800	74.0	27.7	N/A	N/A	N/A	EM	
D61	BF4M1012E	82	1800	76.0	28.6	N/A	N/A	N/A	EM	
D64	BF4M1012E	86	2400	67.0	30.0	N/A	N/A	N/A	EM	
C71	BF6M1012	95	2000	53.0	33.3	379	57.0	27.9	EM	
C74	BF6M1012	99	2100	53.0	34.7	400	60.0	29.5	EM	
C74.9/7	BF6M1012	98	2500	42.9	34.2	400	60.0	29.5	EM	
C74.9/8	BF6M1012	99	2400	45.3	34.7	400	60.0	29.5	EM	
C74.9/9	BF6M1012	99	2300	47.3	34.7	400	60.0	29.5	EM	
C74.9/a	BF6M1012	99	2200	49.5	34.7	400	60.0	29.5	EM	
C74.9/b	BF6M1012	99	2100	51.8	34.7	400	60.0	29.5	EM	
C73.9	BF6M1012	99	2000	54.4	34.7	400	60.0	29.5	EM	
D72/1	BF6M1012	96	1800	58.0	33.8	N/A	N/A	N/A	EM	
C72	BF6M1012E	96	2000	53.0	33.8	382	57.0	28.2	EM	
C74.9	BF6M1012E	100	2200	50.1	35.1	427	65.0	31.5	EM	
C74.9/1	BF6M1012E	100	2500	44.1	35.1	400	60.0	29.5	EM	
C74.9/2	BF6M1012E	100	2400	46.0	35.1	400	60.0	29.5	EM	
C74.9/3	BF6M1012E	100	2300	48.0	35.1	400	60.0	29.5	EM	
C74.9/4	BF6M1012E	100	2100	52.5	35.1	400	60.0	29.5	EM	
C74.9/6	BF6M1012E	100	2000	55.1	35.1	400	60.0	29.5	EM	
C74/1	BF6M1012E	99	2300	50.0	34.7	400	60.0	31.5	EM	
D72	BF6M1012E	96	1800	58.0	33.8	N/A	N/A	N/A	EM	