



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	4DZXL01.4029	0.3428	Diesel	3000, 5000
SPECIAL FEATURES & EMISSION CONTROL SYSTEMS			TYPICAL EQUIPMENT APPLICATION	
Indirect Diesel Injection			Loader, Tractor, Dozer, Pump, Compressor, 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 (NO_x), or non-methane hydrocarbon plus oxides of nitrogen (NMHC+NO_x), 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	NO _x	NMHC+NO _x	CO	PM	ACCEL	LUG	PEAK
8 ≤ kW < 19	Tier 1	STD	N/A	N/A	9.5	6.6	0.80	20	15	50
19 ≤ kW < 37	Tier 2	STD	N/A	N/A	7.5	5.5	0.60	20	15	50
		CERT	-	-	4.8	2.4	0.26	2	2	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 15th day of April 2004.

Allen Lyons, Chief
Mobile Source Operations Division

Engine Model Summary Form

Manufacturer: **Deutz AG**
 Engine category: **Nonroad CI**
 EPA Engine Family: **4DZZXL01.4029**
 Mfr Family Name: **FM1008F**
 Process Code: **New Submission**

Attachment 1 of 1
 M-R-013-0132

1. Engine Code	2. Engine Model	3. BHP @ RPM (SAE Gross)	4. Fuel Rate: mm/stroke @ peak HP (for diesel only)	5. Fuel Rate: (lbs/hr) @ peak HP (for diesels only)	6. Torque @ RPM (SEA Gross)	7. Fuel Rate: mm/stroke @ peak torque	8. Fuel Rate: (lbs/hr) @ peak torque	9. Emission Control Device Per SAE J1930
F3M1008F		26.1@3600	21.2	12.70	47.2@2100	21.7	7.58	IDI
F3M1008F		23.5@3000	21.0	10.47	46.5@2100	21.5	7.52	IDI
F3M1008F		25.7@3400	21.0	11.88	45.7@2100	21.0	7.34	IDI
F3M1008F		24.8@3300	21.0	11.53	45.7@2100	21.0	7.34	IDI
F3M1008F		13.4@1800	18.7	5.60	FIXED SPEED	FIXED SPEED	FIXED SPEED	IDI
F3M1008F		26.1@3600	21.2	12.70	FIXED SPEED	FIXED SPEED	FIXED SPEED	IDI
F4M1008F		34.2@3600	20.7	16.51	57.5@2200	21.0	10.25	IDI
F4M1008F		33.9@3400	21.0	15.83	59.0@2000	21.0	9.30	IDI
F4M1008F		32.9@3300	21.0	15.37	59.0@2000	21.0	9.30	IDI
F4M1008F		30.2@3000	20.0	13.29	59.0@2000	21.0	9.30	IDI
F4M1008F		29.1@2800	20.2	12.54	57.5@2000	20.8	9.22	IDI
F4M1008F		25.5@2500	20.2	11.20	54.6@1800	21.0	8.38	IDI
F4M1008F		24.8@2400	20.2	10.76	55.7@2000	20.7	9.17	IDI
F4M1008F		18.2@1800	19.5	7.78	FIXED SPEED	FIXED SPEED	FIXED SPEED	IDI
F4M1008F		29.5@3000	19.5	12.96	FIXED SPEED	FIXED SPEED	FIXED SPEED	IDI