

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-45-9;

**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)
2002	2DZXL01.2022	1.2	Diesel	5000
SPECIAL FEATURES & EMISSION CONTROL SYSTEMS			TYPICAL EQUIPMENT APPLICATION	
Indirect Diesel Injection, Smoke Puff Limiter, Turbocharger			Loader, 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 (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 1	STD	N/A	N/A	9.5	5.5	0.80	20	15	50
		CERT	-	-	5.4	1.5	0.32	6	1	14

**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 28<sup>TH</sup> day of February 2002.

  
 Allen Lyons, Chief  
 New Vehicle/Engine Programs Branch

Manufacturer: DEUTZ AG  
 Engine Category: Nonroad CI  
 EPA Engine Family: 2DZX101.2022

**Engine Model and Part Number Summary Form**

ED#11-R-013-0079  
 Attachment 1081

Engine code	Engine Model	BHP	BKW	Rated Power Engine Speed	Injection rate at rated power, $\text{mm}^3/\text{stroke}$	Peak torque $\pm 5\%$	Speed at peak torque $\pm 200 \text{ rpm}$	Injection rate at peak torque $\text{mm}^3/\text{stroke}$	Fuel injection pump	Fuel Injector	Turbocharger
CD28,5	BF4M1008	38	28.5	3600	26.5	90.3	2400	26	107.6590.290	107.6531.436	144.9610.055
CD26,0	BF4M1008	35	26.0	3000	24.5	93.3	2000	25.5	107.6590.290	107.6531.436	144.9610.056
D28,5	BF4M1008	38	28.5	3600	26.5	---	---	---	107.6590.290	107.6531.436	144.9610.056