

California Environmental Protection Agency Air Resources Board	DEUTZ AG	EXECUTIVE ORDER U-R-013-0438 New Off-Road Compression-Ignition Engines
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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 systems 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)
2012	CDZXL02.9040	2.925	Diesel	5000
SPECIAL FEATURES & EMISSION CONTROL SYSTEMS			TYPICAL EQUIPMENT APPLICATION	
Common Rail Direct Injection, Electronic Control Module, Exhaust Gas Recirculation, Smoke Puff Limiter			Loader, Tractor, and Dozer	

The engine models and codes are attached.

The following are the exhaust certification standards (STD) and certification levels (CERT) for non-methane hydrocarbon (NMHC), 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):

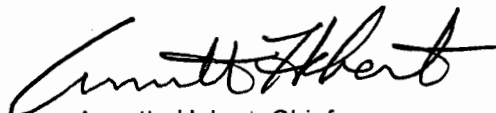
RATED POWER CLASS	EMISSION STANDARD CATEGORY		EXHAUST (g/kW-hr)					OPACITY (%)		
			NMHC	NOx	NMHC+NOx	CO	PM	ACCEL	LUG	PEAK
19 ≤ kW < 37	Interim Tier 4	STD	N/A	N/A	7.5	5.5	0.30	20	15	50
		CERT	--	--	5.1	3.5	0.06	2	2	2

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 21 day of December 2012.


Annette Hebert, Chief
Mobile Source Operations Division

Deutz AG
Nonroad CI

Engine Model Summary Template

Attachment page 1 of 1

EO# U-R-013-0438

Date: 12/17/2012

Engine Family	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@pe ak torque	8.Fuel Rate: (lbs/hr)@peak torque	9.Emission Control Device Per SAE J1930
CDZXL02.9040	C3OI36.4	D2.9L4	48.8@2600	37.5	21.6	108.4@1600	36.5	12.9	DDI, ECM, EGR, SPL
CDZXL02.9040	C3OI34	D2.9L4	45.6@2500	36.0	19.9	108.4@1600	36.5	12.9	DDI, ECM, EGR
CDZXL02.9040	C3OI33	D2.9L4	44.3@2400	35.5	18.9	108.4@1600	36.5	12.9	DDI, ECM, EGR
CDZXL02.9040	C3OI31	D2.9L4	41.6@2300	34.0	17.3	108.4@1600	36.5	12.9	DDI, ECM, EGR
CDZXL02.9040	C3OI30	D2.9L4	40.2@2200	34.0	16.6	108.4@1600	36.5	12.9	DDI, ECM, EGR
CDZXL02.9040	C3OI32	D2.9L4	42.9@2600	33.0	19.0	97.3@1600	32.0	11.3	DDI, ECM, EGR
CDZXL02.9040	C3OI31A	D2.9L4	41.6@2500	32.5	18.0	97.3@1600	32.0	11.3	DDI, ECM, EGR
CDZXL02.9040	C3OI30A	D2.9L4	40.2@2400	32.0	17.0	97.3@1600	32.0	11.3	DDI, ECM, EGR
CDZXL02.9040	C3OI28	D2.9L4	37.5@2300	31.5	16.0	97.3@1600	32.0	11.3	DDI, ECM, EGR
CDZXL02.9040	C3OI27	D2.9L4	36.2@2200	31.5	15.3	97.3@1600	32.0	11.3	DDI, ECM, EGR