

California Environmental Protection Agency <b>Air Resources Board</b>	DEUTZ AG	<b>EXECUTIVE ORDER U-R-013-0445</b> 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)
2013	DDZXL02.9016	2.925	Diesel	8000
SPECIAL FEATURES & EMISSION CONTROL SYSTEMS			TYPICAL EQUIPMENT APPLICATION	
Common Rail Direct Injection, Turbocharger, Charge Air Cooler, Electronic Control Module, Exhaust Gas Recirculation, Diesel Oxidation Catalyst			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):

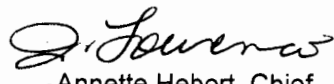
RATED POWER CLASS	EMISSION STANDARD CATEGORY		EXHAUST (g/kW-hr)					OPACITY (%)		
			NMHC	NOx	NMHC+NOx	CO	PM	ACCEL	LUG	PEAK
37 ≤ kW < 56	Tier 4 Final	STD	N/A	N/A	4.7	5.0	0.03	N/A	N/A	N/A
		CERT	--	--	3.9	0.1	0.02	--	--	--

**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 25<sup>th</sup> day of January 2013.

  
 Annette Hebert, Chief  
 Mobile Source Operations Division

Deutz AG  
Nonroad CI

**Engine Model Summary Template**

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EO# U-R-013-0445

Date: 11/8/2013

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
DDZXL02.9016	C4DI55C	TCD2.9L4	74.2@2300	57.0	29.1	221.2@1600	67.5	23.9	DDI, TC, CAC, EGR, ECM, DOC
DDZXL02.9016	C4DI55	TCD2.9L4	74.2@2600	56.0	29.1	221.2@1600	67.5	23.9	DDI, TC, CAC, EGR, ECM, DOC
DDZXL02.9016	C4DI55A	TCD2.9L4	74.2@2500	56.4	31.3	221.2@1600	67.5	23.9	DDI, TC, CAC, EGR, ECM, DOC
DDZXL02.9016	C4DI55B	TCD2.9L4	74.2@2500	56.7	30.2	221.2@1600	67.5	23.9	DDI, TC, CAC, EGR, ECM, DOC
DDZXL02.9016	C4DI54	TCD2.9L4	72.4@2200	56.5	27.6	191.7@1800	59.0	23.5	DDI, TC, CAC, EGR, ECM, DOC
DDZXL02.9016	C4DI55D	TCD2.9L4	74.2@2200	56.7	27.6	221.2@1600	67.5	23.9	DDI, TC, CAC, EGR, ECM, DOC
DDZXL02.9016	C4DI50C	TCD2.9L4	67.0@2300	52.3	26.7	199.1@1600	67.5	21.5	DDI, TC, CAC, EGR, ECM, DOC
DDZXL02.9016	C4DI45	TCD2.9L4	60.3@2600	47.0	27.1	177.0@1600	54.0	19.1	DDI, TC, CAC, EGR, ECM, DOC
DDZXL02.9016	C4DI45A	TCD2.9L4	60.3@2300	49.0	25.0	177.0@1600	54.0	19.1	DDI, TC, CAC, EGR, ECM, DOC
DDZXL02.9016	C4DI45B	TCD2.9L4	60.3@2200	49.0	23.9	177.0@1600	54.0	19.1	DDI, TC, CAC, EGR, ECM, DOC
DDZXL02.9016	C4DT50	TCD2.9L4	67.0@2200	52.5	25.6	200.6@1600	61.5	21.8	DDI, TC, CAC, EGR, ECM, DOC
DDZXL02.9016	C4DT45	TCD2.9L4	60.3@2200	49.0	23.9	179.9@1600	55.5	19.7	DDI, TC, CAC, EGR, ECM, DOC