California Environmental Protection Agency Air Resources Board	DEUTZ AG	EXECUTIVE ORDER U-R-013-0441 New Off-Road Compression-Ignition Engines

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	DDZXL04.1012	4.038	Diesel	8000

SPECIAL FEATURES & EMISSION CONTROL SYSTEMS	TYPICAL EQUIPMENT APPLICATION
Common Rail Direct Injection, Turbocharger, Charge Air Cooler, Electronic Control Module, Smoke Puff Limiter, Selective Catalytic Reduction-Urea	Tractor

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
75 ≤ kW < 130	Interim Tier 4/ ALT NO_x	STD	0.19	3.4	N/A	5.0	0.02	N/A	N/A	N/A
		CERT	0.10	2.2	--	0.5	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 25th day of January 2013.

Annette Hebert, Chief
Mobile Source Operations Division

Deutz AG

Nonroad CI

Engine Model Summary Template

Attachment page 1 of 1

EO# U-R-013-0441

Date: 1/7/2013

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@peak torque	8.Fuel Rate: (lbs/hr)@peak torque	9.Emission Control Device Per SAE J1930
DDZXL04.1012	C4ST112U	TCD4.1L4	151.1@2200	112	54.8	510.4@1600	154.0	54.8	DDI, TC, CAC, ECM, SPL, SCR
DDZXL04.1012	C4ST102U	TCD4.1L4	137.4@2200	102	49.9	460.2@1600	137.0	48.7	DDI, TC, CAC, ECM, SPL, SCR
DDZXL04.1012	C4ST103U	TCD4.1L4	139.0@2200	103	50.4	463.2@1400	134.5	41.8	DDI, TC, CAC, ECM, SPL, SCR
DDZXL04.1012	C4ST91U	TCD4.1L4	121.9@2200	92	45.0	402.7@1400	115.5	35.9	DDI, TC, CAC, ECM, SPL, SCR
DDZXL04.1012	C4ST83UA	TCD4.1L4	112.6@2200	85	41.6	354.8@1600	104.0	37.0	DDI, TC, CAC, ECM, SPL, SCR
DDZXL04.1012	C4ST91UA	TCD4.1L4	122.2@2100	93	43.4	416.0@1500	119.0	39.7	DDI, TC, CAC, ECM, SPL, SCR
DDZXL04.1012	C4ST98U	TCD4.1L4	132.0@2100	100	46.7	445.5@1500	128.0	42.7	DDI, TC, CAC, ECM, SPL, SCR
DDZXL04.1012	C4ST110U	TCD4.1L4	146.8@2100	113	52.7	489.0@1500	142.0	47.3	DDI, TC, CAC, ECM, SPL, SCR
DDZXL04.1012	C4ST120U	TCD4.1L4	160.9@2100	124	57.9	515.6@1500	153.0	51.0	DDI, TC, CAC, ECM, SPL, SCR