

California Environmental Protection Agency Air Resources Board	DEUTZ AG	EXECUTIVE ORDER U-R-013-0442 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	DDZXL06.1033	4.1, 6.1	Diesel	8000
SPECIAL FEATURES & EMISSION CONTROL SYSTEMS			TYPICAL EQUIPMENT APPLICATION	
Common Rail Direct Injection, Turbocharger, Charge Air Cooler, Electronic Control Module, Smoke Puff Limiter, Exhaust Gas Recirculation, Continuous Trap Oxidizer			Dozer, Pump, Compressor and Other Industrial Equipment	

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):

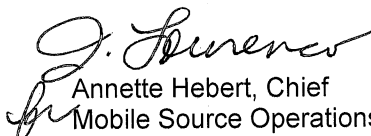
RATED POWER CLASS	EMISSION STANDARD CATEGORY		EXHAUST (g/kW-hr)					OPACITY (%)		
			NMHC	NOx	NMHC+NOx	CO	PM	ACCEL	LUG	PEAK
75 ≤ kW < 130	Interim Tier 4/ ALT NO _x	STD	0.19	3.4	N/A	5.0	0.02	N/A	N/A	N/A
		CERT	0.09	2.8	--	0.1	0.01	--	--	--

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

Nowroad CI

Attachment page 1 of 2
Engine Model Summary Template

EO # U-R-013-0442

Date: 1/7/2013

Engine Family	1.Engine Code	2.Engine Model	3.BHP@RPM (SAE Gross)	4.Fuel Rate: (lbs/hr) @ peak HP mm/stroke @ peak (for diesel only)		5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only)		6.Torque @ RPM (SEA Gross)	7.Fuel Rate: mm/stroke@p ak torque	8.Fuel Rate: (lbs/hr)@peak torque	9.Emission Control Device Per SAE J1930
				mm/stroke @ peak (for diesel only)	HP	mm/stroke @ peak (for diesels only)	HP				
DDZXL06.1033	C4EI115	TCD4.1L4	154.21@2400	110	58.6	609@1600	133	47.3	DDI, TC, CAC, ECM,		
DDZXL06.1033	C4EI115A	TCD4.1L4	154.21@2300	110	56.7	609@1600	133	46.2	DDI, TC, CAC, ECM,		
DDZXL06.1033	C4EI115B	TCD4.1L4	154.21@2200	114	55.7	609@1600	133	46.2	DDI, TC, CAC, ECM,		
DDZXL06.1033	C4EI115C	TCD4.1L4	154.21@2100	118	55.0	609@1600	133	46.2	DDI, TC, CAC, ECM,		
DDZXL06.1033	C4EI115D	TCD4.1L4	154.21@2000	126	56	609@1600	133	46.2	DDI, TC, CAC, ECM,		
DDZXL06.1033	C4EI105	TCD4.1L4	140.81@2400	90	48	550@1600	118	41.9	DDI, TC, CAC, ECM,		
DDZXL06.1033	C4EI105A	TCD4.1L4	140.81@2300	103	52.6	550@1600	118	41.9	DDI, TC, CAC, ECM,		
DDZXL06.1033	C4EI105B	TCD4.1L4	140.81@2200	107	52.2	550@1600	118	41.9	DDI, TC, CAC, ECM,		
DDZXL06.1033	C4EI105C	TCD4.1L4	140.81@2000	113.5	50.4	550@1600	118	41.9	DDI, TC, CAC, ECM,		
DDZXL06.1033	C4EI105D	TCD4.1L4	140.81@2100	110	51.3	550@1600	118	41.9	DDI, TC, CAC, ECM,		
DDZXL06.1033	C4EI95	TCD4.1L4	127.40@2400	91	48.4	530@1600	113	40.8	DDI, TC, CAC, ECM,		
DDZXL06.1033	C4EI95A	TCD4.1L4	127.40@2200	97	47.5	530@1600	113	40.8	DDI, TC, CAC, ECM,		
DDZXL06.1033	C4EI95B	TCD4.1L4	127.40@2100	100	46.5	530@1600	113	40.8	DDI, TC, CAC, ECM,		
DDZXL06.1033	C4EI95C	TCD4.1L4	127.40@2000	103.4	45.9	530@1600	113	40.8	DDI, TC, CAC, ECM,		
DDZXL06.1033	C4EI90	TCD4.1L4	120.60@2300	90.6	46.3	500@1600	107	39.1	DDI, TC, CAC, ECM,		
DDZXL06.1033	C4EI90A	TCD4.1L4	120.60@2200	93	45.4	500@1600	107	39.1	DDI, TC, CAC, ECM,		
DDZXL06.1033	C4EI80	TCD4.1L4	107.3@2400	80	42.8	440@1600	95	34.1	DDI, TC, CAC, ECM,		
DDZXL06.1033	C4EI80A	TCD4.1L4	107.3@2300	83	42.2	440@1600	95	34.1	DDI, TC, CAC, ECM,		
DDZXL06.1033	C4EI80B	TCD4.1L4	107.3@2200	84.4	41.2	440@1600	95	34.1	DDI, TC, CAC, ECM,		
DDZXL06.1033	C4EI80C	TCD4.1L4	107.3@2100	86	40.1	440@1600	95	34.1	DDI, TC, CAC, ECM,		
DDZXL06.1033	C4EI80D	TCD4.1L4	107.3@2000	88	39.1	440@1600	95	34.1	DDI, TC, CAC, ECM,		
DDZXL06.1033	C4EI129	TCD6.1L4	172.9@2200	88	64.5	750@1450	106	51.2	DDI, TC, CAC, ECM,		
DDZXL06.1033	C4EI129A	TCD6.1L4	172.9@2000	92.5	61.6	750@1450	106	51.2	DDI, TC, CAC, ECM,		
DDZXL06.1033	C4EI120	TCD6.1L4	160.9@1900	88.5	56	750@1450	106	51.2	DDI, TC, CAC, ECM,		
DDZXL06.1033	C4EI120A	TCD6.1L4	160.9@1800	90	54	750@1450	106	51.2	DDI, TC, CAC, ECM,		
DDZXL06.1033	C4EI120B	TCD6.1L4	160.9@2300	80	61.3	720@1450	102	49.2	DDI, TC, CAC, ECM,		
DDZXL06.1033	C4EI120C	TCD6.1L4	160.9@2200	82	60.1	720@1450	102	49.2	DDI, TC, CAC, ECM,		
DDZXL06.1033	C4EI120D	TCD6.1L4	160.9@2100	84	58.7	720@1450	102	49.2	DDI, TC, CAC, ECM,		

CTOX = DPFF + DOC

Deutz AG

Nonroad CI

Attachment page 2 of 2
Engine Model Summary Template

EO# U-R-013-0442

Date: 1/17/2013

Engine Family	1.Engine Code	2.Engine Model	3.BHP@RPM (SAE Gross)	4.Fuel Rate:		5.Fuel Rate:		3.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
				mm/stroke @ peak HP (for diesel only)	HP (for diesels only)	(lbs/hr) @ peak HP					
DDZXL06.1033	C4EI120E	TCD6.1L4	160.9@2000	87		57.9		720@1450	102	49.2	DDI, TC, CAC, ECM, EGR, CTOX , SPL
DDZXL06.1033	C4EI105	TCD6.1L4	140.8@1900	80		50.6		630@1450	90	43.4	DDI, TC, CAC, ECM, EGR, CTOX
DDZXL06.1033	C4EI100	TCD6.1L4	134.1@1800	79		47.3		630@1450	90	43.4	DDI, TC, CAC, ECM, EGR, CTOX
DDZXL06.1033	C4EI105A	TCD6.1L4	140.8@2000	80		53.3		630@1450	90	43.4	DDI, TC, CAC, ECM, EGR, CTOX