

California Environmental Protection Agency Air Resources Board	DEUTZ AG	EXECUTIVE ORDER U-R-013-0440 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	DDZXL03.6017	3.621	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
56 ≤ 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	0.01	2.9	--	0.01	0.02	--	--	--

BE IT FURTHER RESOLVED: That for the listed engine models, the manufacturer has complied with the more stringent set of standards from the various power categories in conformance with Section 1039.230 (e) of the "California Exhaust Emission Standards and Test Procedures for 2008 and Later Tier 4 Off-Road Compression-Ignition Engines, Part I-C" adopted October 20, 2005.

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

Attachment

Page 1 of 1

EO#U-R-013-0440

Date: 1/10/2013

Engine Model Summary Template

Nonroad CI

Engine Family	1.Engine Code	2.Engine Model	3.BHP@RPM (SAE Gross)		4.Fuel Rate: (lbs/hr) @ 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
DDZXL03.6017	C4DT85	TCD3.6L4	114.5@2200	94	45.9	480@1600	113	40.1	DDI, TC, CAC, EGR, ECM,	DOC					
DDZXL03.6017	C4DT77	TCD3.6L4	103.3@2200	86	42	440@1600	101	35.9	DDI, TC, CAC, EGR, ECM,						
DDZXL03.6017	C4DT69	TCD3.6L4	93.2@2200	77.5	37.8	397@1600	89.5	31.8	DDI, TC, CAC, EGR, ECM,						
DDZXL03.6017	C4DT62	TCD3.6L4	83.8@2200	72	35	358@1600	82	25.5	DDI, TC, CAC, EGR, ECM,						
DDZXL03.6017	C4DI90A	TCD3.6L4	120.6@2200	98	47.9	480@1600	113	40.1	DDI, TC, CAC, EGR, ECM,						
DDZXL03.6017	C4DI90	TCD3.6L4	120.6@2300	96	49	480@1600	113	40.1	DDI, TC, CAC, EGR, ECM,						
DDZXL03.6017	C4DI85A	TCD3.6L4	113.9@2200	91.5	44.7	460@1600	106.5	37.8	DDI, TC, CAC, EGR, ECM,						
DDZXL03.6017	C4DI90C	TCD3.6L4	120.6@2000	103.5	45.9	480@1600	113	40.1	DDI, TC, CAC, EGR, ECM,						
DDZXL03.6017	C4DT70	TCD3.6L4	93.8@2200	79	38.6	373@1600	85.5	30.3	DDI, TC, CAC, EGR, ECM,						
DDZXL03.6017	C4DI85	TCD3.6L4	113.9@2300	89.5	45.7	460@1600	106.5	37.8	DDI, TC, CAC, EGR, ECM,						
DDZXL03.6017	C4DI80A	TCD3.6L4	107.2@2200	85	41.5	430@1600	98.5	35	DDI, TC, CAC, EGR, ECM,						
DDZXL03.6017	C4DI85C	TCD3.6L4	113.9@2000	96.5	42.8	460@1600	106.5	37.8	DDI, TC, CAC, EGR, ECM,						
DDZXL03.6017	C4DI80	TCD3.6L4	107.2@2300	84	42.9	430@1600	98.5	35	DDI, TC, CAC, EGR, ECM,						
DDZXL03.6017	C4DI74A	TCD3.6L4	99.7@2200	79.5	38.8	410@1600	92.5	32.8	DDI, TC, CAC, EGR, ECM,						
DDZXL03.6017	C4DI74	TCD3.6L4	99.7@2300	78	39.8	410@1600	92.5	32.8	DDI, TC, CAC, EGR, ECM,						
DDZXL03.6017	C4DI70A	TCD3.6L4	93.8@2200	75	36.6	390@1600	87.5	31.1	DDI, TC, CAC, EGR, ECM,						
DDZXL03.6017	C4DT60	TCD3.6L4	80.9@2200	69.5	33.9	322@1600	74	26.3	DDI, TC, CAC, EGR, ECM,						
DDZXL03.6017	C4DT74	TCD3.6L4	99.9@2200	83	40.5	390@1600	89	31.6	DDI, TC, CAC, EGR, ECM,						
DDZXL03.6017	C4DT64	TCD3.6L4	86.3@2200	73	35.6	343@1600	78	27.7	DDI, TC, CAC, EGR, ECM,						
DDZXL03.6017	C4DI70	TCD3.6L4	93.8@2300	73.5	37.5	390@1600	87.5	31.1	DDI, TC, CAC, EGR, ECM,						
DDZXL03.6017	C4DI74C	TCD3.6L4	99.7@2000	83.5	37.1	410@1600	92.5	32.8	DDI, TC, CAC, EGR, ECM,						
DDZXL03.6017	C4DT66	TCD3.6L4	88.5@2200	75	36.6	373@1600	85.5	30.3	DDI, TC, CAC, EGR, ECM,						
DDZXL03.6017	C4DT74A	TCD3.6L4	99.9@2200	83	40.5	420@1600	94.5	33.5	DDI, TC, CAC, EGR, ECM,						
DDZXL03.6017	C4DT81	TCD3.6L4	108.4@2200	90	43.9	430@1600	98.5	35	DDI, TC, CAC, EGR, ECM,						