

 CALIFORNIA AIR RESOURCES BOARD	DEUTZ AG	EXECUTIVE ORDER U-R-013-0578 New Off-Road Compression-Ignition Engines
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Pursuant to the authority vested in California 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-14-012;

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)
2019	KDZXL03.6060	3.621	Diesel	8000
SPECIAL FEATURES & EMISSION CONTROL SYSTEMS			TYPICAL EQUIPMENT APPLICATION	
Common Rail Direct Injection, Turbocharger, Charge Air Cooler, Exhaust Gas Recirculation, Electronic Control Module, Diesel Oxidation Catalyst, Selective Catalytic Reduction-Urea			Loader, Tractor, Dozer, Pump, Compressor, 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
56 ≤ kW < 130	Tier 4 Final	OPTIONAL STD	0.19	0.40	N/A	5.0	0.02	N/A	N/A	N/A
		CERT	0.001	0.31	--	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).

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 New 2011 and Later Tier 4 Off-Road Compression Ignition Engines, Part I-D" adopted October 20, 2005 and last amended October 25, 2012.

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 28th day of September 2018.


 Annette Hebert, Chief
 Emissions Compliance, Automotive Regulations and Science Division

EO# 0-R-013-0578
Date: 9/4/2018

Attachment page 1 of 2
Engine Model Summary Template

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Engine Family	1.Engine Code	2.Engine Model	3.BHP@RPM (SAE Gross)	4.Fuel Rate: mm ³ /stroke @ peak HP (for diesel only)	5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only)	6.Torque Nm @ RPM (SEA Gross)	7.Fuel Rate: mm ³ /stroke@pe ak torque	8.Fuel Rate: (lbs/hr)@peak torque	9.Emission Control Device Per SAE J1930
KDZXL03.6060	CFX1100D	TCD3.6L4	134.1@2000	113.0	50.2	500@1600	114.5	40.7	DDI, TC, CAC, EGR, ECM, DOC, SCR-U
KDZXL03.6060	CFX1100C	TCD3.6L4	134.1@2200	106.5	52.0	500@1600	114.5	40.7	DDI, TC, CAC, EGR, ECM, DOC, SCR-U
KDZXL03.6060	CFX1100U	TCD3.6L4	134.1@2300	103.5	52.8	500@1600	114.5	40.7	DDI, TC, CAC, EGR, ECM, DOC, SCR-U
KDZXL03.6060	CFX195BU	TCD3.6L4	127.3@2000	107.0	47.5	500@1600	114.5	40.7	DDI, TC, CAC, EGR, ECM, DOC, SCR-U
KDZXL03.6060	CFX195AU	TCD3.6L4	127.3@2200	100.9	49.3	500@1600	114.5	40.7	DDI, TC, CAC, EGR, ECM, DOC, SCR-U
KDZXL03.6060	CFX195U	TCD3.6L4	127.3@2300	98.4	48.0	500@1600	114.5	40.7	DDI, TC, CAC, EGR, ECM, DOC, SCR-U
KDZXL03.6060	CFX170U	TCD3.6L4	93.8@2200	73.1	35.7	390@1600	87.5	31.1	DDI, TC, CAC, EGR, ECM, DOC, SCR-U
KDZXL03.6060	CFX174BU	TCD3.6L4	99.7@2000	81.7	36.3	410@1600	92.0	32.7	DDI, TC, CAC, EGR, ECM, DOC, SCR-U
KDZXL03.6060	CFX174AU	TCD3.6L4	99.7@2200	77.1	37.6	410@1600	92.0	32.7	DDI, TC, CAC, EGR, ECM, DOC, SCR-U
KDZXL03.6060	CFX174U	TCD3.6L4	99.7@2300	76.8	39.2	410@1600	92.0	32.7	DDI, TC, CAC, EGR, ECM, DOC, SCR-U
KDZXL03.6060	CFX180BU	TCD3.6L4	107.2@2000	90.1	40.0	430@1600	98.4	34.9	DDI, TC, CAC, EGR, ECM, DOC, SCR-U
KDZXL03.6060	CFX180AU	TCD3.6L4	107.2@2200	85.6	41.8	430@1600	98.4	34.9	DDI, TC, CAC, EGR, ECM, DOC, SCR-U
KDZXL03.6060	CFX180U	TCD3.6L4	107.2@2300	84.7	43.2	430@1600	98.4	34.9	DDI, TC, CAC, EGR, ECM, DOC, SCR-U
KDZXL03.6060	CFX185BU	TCD3.6L4	113.9@2000	95.5	42.4	460@1600	105.0	37.3	DDI, TC, CAC, EGR, ECM, DOC, SCR-U
KDZXL03.6060	CFX185AU	TCD3.6L4	113.9@2200	90.5	44.2	460@1600	105.0	37.3	DDI, TC, CAC, EGR, ECM, DOC, SCR-U
KDZXL03.6060	CFX185U	TCD3.6L4	113.9@2300	89.2	45.5	460@1600	105.0	37.3	DDI, TC, CAC, EGR, ECM, DOC, SCR-U
KDZXL03.6060	CFX190BU	TCD3.6L4	120.6@2000	101.2	44.9	480@1600	109.7	39.0	DDI, TC, CAC, EGR, ECM, DOC, SCR-U
KDZXL03.6060	CFX190AU	TCD3.6L4	120.6@2200	95.2	46.5	480@1600	109.7	39.0	DDI, TC, CAC, EGR, ECM, DOC, SCR-U
KDZXL03.6060	CFX190U	TCD3.6L4	120.6@2300	93.6	47.8	480@1600	109.7	39.0	DDI, TC, CAC, EGR, ECM, DOC, SCR-U
KDZXL03.6060	CFXT100U	TCD3.6L4	134.1@2200	108.0	52.7	500@1600	115.0	40.9	DDI, TC, CAC, EGR, ECM, DOC, SCR-U
KDZXL03.6060	CFXT95U	TCD3.6L4	127.3@2200	101.0	49.3	500@1600	115.0	40.9	DDI, TC, CAC, EGR, ECM, DOC, SCR-U
KDZXL03.6060	CFXT92U	TCD3.6L4	123.3@2200	97.5	47.6	500@1600	115.0	40.9	DDI, TC, CAC, EGR, ECM, DOC, SCR-U
KDZXL03.6060	CFXT85U	TCD3.6L4	114.5@2200	89.0	43.5	480@1600	107.0	38.0	DDI, TC, CAC, EGR, ECM, DOC, SCR-U
KDZXL03.6060	CFXT77U	TCD3.6L4	103.2@2200	82.0	40.0	440@1600	99.0	35.1	DDI, TC, CAC, EGR, ECM, DOC, SCR-U
KDZXL03.6060	CFXT75U	TCD3.6L4	99.9@2200	80.0	39.0	420@1600	95.0	33.7	DDI, TC, CAC, EGR, ECM, DOC, SCR-U
KDZXL03.6060	CFXT69U	TCD3.6L4	93.1@2200	73.0	35.6	397@1600	89.0	31.6	DDI, TC, CAC, EGR, ECM, DOC, SCR-U
KDZXL03.6060	CFXT62U	TCD3.6L4	83.8@2200	68.0	33.2	360@1600	82.0	29.1	DDI, TC, CAC, EGR, ECM, DOC, SCR-U

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Attachment Page 2 of 2
Engine Model Summary Template

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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 Nm @ 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
<DZXL03.6060	CFXT88U	TCD3.6L4	117.9@2200	94.0	45.8	500@1600	115.0	40.9	DDI, TC, CAC, EGR, ECM, DOC, SCR-U
<DZXL03.6060	CFXT83U	TCD3.6L4	111.2@2200	87.0	42.4	476@1600	105.0	37.3	DDI, TC, CAC, EGR, ECM, DOC, SCR-U
<DZXL03.6060	CFXT70U	TCD3.6L4	93.8@2200	74.0	36.1	397@1600	89.0	31.6	DDI, TC, CAC, EGR, ECM, DOC, SCR-U
<DZXL03.6060	CFXT61U	TCD3.6L4	83.8@2200	68.0	33.2	360@1600	82.0	29.1	DDI, TC, CAC, EGR, ECM, DOC, SCR-U
<DZXL03.6060	CFXT68U	TCD3.6L4	93.1@2200	73.0	35.6	397@1600	89.0	31.6	DDI, TC, CAC, EGR, ECM, DOC, SCR-U
<DZXL03.6060	CFXT74U	TCD3.6L4	99.9@2200	80.0	39.0	420@1600	95.0	33.7	DDI, TC, CAC, EGR, ECM, DOC, SCR-U
<DZXL03.6060	CFXT76U	TCD3.6L4	103.2@2200	82.0	40.0	440@1600	99.0	35.1	DDI, TC, CAC, EGR, ECM, DOC, SCR-U
<DZXL03.6060	CFXT82U	TCD3.6L4	111.2@2200	87.0	42.4	476@1600	105.0	37.3	DDI, TC, CAC, EGR, ECM, DOC, SCR-U
<DZXL03.6060	CFXT84U	TCD3.6L4	114.5@2200	89.0	43.5	480@1600	107.0	38.0	DDI, TC, CAC, EGR, ECM, DOC, SCR-U
<DZXL03.6060	CFXT87U	TCD3.6L4	117.9@2200	94.0	45.8	500@1600	115.0	40.9	DDI, TC, CAC, EGR, ECM, DOC, SCR-U
<DZXL03.6060	CFXT94U	TCD3.6L4	127.3@2200	101.0	49.3	500@1600	115.0	40.9	DDI, TC, CAC, EGR, ECM, DOC, SCR-U
<DZXL03.6060	CFXT99U	TCD3.6L4	134.1@2200	108.0	52.7	500@1600	115.0	40.9	DDI, TC, CAC, EGR, ECM, DOC, SCR-U