California Environmental Protection Agency Air Resources Board

DEUTZ AG

EXECUTIVE ORDER U-R-013-0527 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-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)			
2017	HDZXL02.9020	2.925	Diesel	8000			
	FEATURES & EMISSION C		TYPICAL EQUIPMENT APPLICATION				
Common Control	Rail Direct Injection, Turb Module, Exhaust Gas Re Oxidation Cataly	circulation, Diesel	Loader, Tractor, 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	EMISSION STANDARD CATEGORY				EXHAUST (g/kW-		OPACITY (%)			
POWER CLASS			NMHC	NOx	NMHC+NOx	СО	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			3.7	0.02	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 _____ 23 rd day of March 2017

Ẩnnette Hebert, Chief

rmissions Compliance, Automotive Regulations and Science Division

Deutz AG Nonroad CI

Engine Model Summary Template

Attachment page 1 of 5. Fuel Rate:

E0# U-R-013-0527 Date: 3/6/2017

Engine Family	1.Engine Code	2.Engine Model	3.BHP@RPM (SAE Gross)	4.Fuel Rate: mm/stroke @ peak HP (for diesel only)	o.Fuel Rate: (lbs/hr) @ peal 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	
HDZXL02.9020	C4DI55C	TD2.9L4	74.2@2300	58.3	29.7	191.7@1800	62.5	25.0	DDI, TC, EGR, ECM, DOC	
HDZXL02.9020	C4DI55,4	TD2.9L4	74.2@2600	56.1	32.4	191.7@1800	62.5	24.9	DDI, TC, EGR, ECM, DOC	
HDZXL02.9020	C4DI55A	TD2.9L4	74.2@2500	56.5	31.4	191.7@1800	62.5	24.9	DDI, TC, EGR, ECM, DOC	
HDZXL02.9020	C4DI55A	TD2.9L4	74.2@2400	57.0	30.3	191.7@1800	62.5	24.9	DDI, TC, EGR, ECM, DOC	
HDZXL02.9020	C4DI54	TD2.9L4	72.4@2200	58.0	28.3	191.7@1800	62.5	24.9	DDI, TC, EGR, ECM, DOC	
HDZXL02.9020	C4DI50	TD2.9L4	67.0@2600	53.5	30.9	172.5@1800	56.2	22.4	DDI, TC, EGR, ECM, DOC	
HDZXL02.9020	C4DI50A	TD2.9L4	67.0@2500	52.0	28.8	172.5@1800	56.2	22.4	DDI, TC, EGR, ECM, DOC	
HDZXL02.9020	C4DI50C	TD2,9L4	67.0@2300	53.9	27.5	172.5@1800	56.2	22.4	DDI, TC, EGR, ECM, DOC	
HDZXL02.9020	C4DI49	TD2.9L4	65.7@2200	53.9	26.3	172.5@1800	56.2	22.4	DDI, TC, EGR, ECM, DOC	
HDZXL02.9020	C4DI45	TD2.9L4	60.3@2600	51.0	29.4	172.5@1800	56.2	. 22.4	DDI, TC, EGR, ECM, DOC	
HDZXL02.9020	C4DI45A	TD2.9L4	60.3@2500	48.0	26.6	172.5@1800	56.2	22.4	DDI, TC, EGR, ECM, DOC	
HDZXL02.9020	C4DI45B	TD2.9L4	60.3@2200	50.7	24.7	172.5@1800	56.2	22.4	DDI, TC, EGR, ECM, DOC	
HDZXL02.9020	C4DT54	TD2.9L4	72.4@2200	58.5	28.5	191.7@1600	61.0	21.6	DDI, TC, EGR, ECM, DOC	
HDZXL02.9020	C4DT50	TD2.9L4	67.0@2200	54.5	26.6	191.7@1600	60.5	21.5	DDI, TC, EGR, ECM, DOC	had in scipcio de salva de 1970
HDZXL02.9020	C4DT45	TD2.9L4	60.3@2200	49.5	24.1	179.9@1800	57.0	22.2	DDI, TC, EGR, ECM, DOC	