## **DEUTZ AG**

EXECUTIVE ORDER U-R-013-0371 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)		
2011	BDZXL02.7096	2.332	Diesel	8000		
SPECIAL FEATURES & EMISSION CONTROL SYSTEMS			TYPICAL EQUIPMENT APPLICATION			
Mechanical Direct Injection, Turbocharger, Charge Air Cooler, Exhaust Gas Recirculation			Crane, Compressor			

The engine models and codes are attached.

The following are the exhaust certification standards (STD) and certification levels (CERT) for hydrocarbon (HC), 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	EMISSION STANDARD		EXHAUST (g/kw-hr)				OPACITY (%)			
CLASS	CATEGORY		HC	NOx	NMHC+NOx	co	₽M	ACCEL	LUG	PEAK
37 ≤ kW < 56	Tier 4 Interim	STD	N/A	N/A	4.7	5.0	0.30	20	15	50
		CERT			4.6	1.2	0.21	3	2	5

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 \_\_\_\_\_ day of April 2011

Annette Hebert, Chief

Mobile Source Operations Division

60# U-R-013-037/ 41 (3/20)	9.Emission Control Device Per SAE J1930	DDI, TC, CAC,EGR
9 4	8.Fuel Rate: (lbs/hr)@peak torgue	17.4
C D	7.Fuel Rate: mm/stroke@pe ak torque	65.5
page ( of	6.Torque @ RPM (SEA Gross)	149@1600 65.5
Attachment page	5.Fuel Rate: 8.Fuel Rate: (lbs/hr) @ peak HP 6.Torque @ RPM mm/stroke@pe (lbs/hr)@peak (for diesels only) (SEA Gross) ak torque torque	24.7
Alfine Model	H.ruel Nate. mm/stroke @ peak HP (for diesel only)	64.5
	3.BHP@RPM (SAE Gross)	60.3@2300
	Engine Family 1.Engine Code 2.Engine Model	TCD2011L03 60.3@2300
A9 101	1.Engine Code	C3UI45
Deutz AG Nouroad CI	Engine Family	BDZXL02.7096