## **DEUTZ AG**

EXECUTIVE ORDER U-R-013-0131 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 system 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)					
2004	4DZXL06.5043	6.5, 5.4, 4.3, 3.2	Diesel	8000					
SPECIAL	FEATURES & EMISSION	CONTROL SYSTEMS	TYPICAL EQUIPMENT APPLICATION						
Direct Diese	el Injection, Smoke Puff	Limiter, Turbocharger	Pump						

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 CLASS	EMISSION STANDARD			ſ	XHAUST (g/kW-ł		OPACITY (%)				
	CATEGORY		HC	NOx	NMHC+NOx	co	PM	ACCEL	LUG	PEAK	
37 <u>&lt;</u> kW < 75	Tier 2	STD	N/A	N/A	7.5	5.0	0.40	20	15	50	
		CERT	-	-	6.7	2.4	0.30	2	2	2	

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 March 2004.

Allen Lyons, Chief

Mobile Source Operations Division

## **Engine Model Summary Form**

Manufacturer: Deutz AG

Engine category: Nonroad CI

EPA Engine Family: 4DZXL06.5043

Mfr Family Name: BFL914

Process Code: Running Change NEW

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9.Emission Control Device Per SAE J1930	SPL box	SPL	SPL	SPL	SPL	SPL	CDI													
8.Fuel Rate: (lbs/hr)@peak torque	20.3045852968	22.3935344015	26.9056644674	28.6603817153	29.6630772855	29.6630772855	29.6630772855	28.4097078228	27.1563383600	29.6630772855	28.4097078228	27.1563383600	29.6630772855	28.4097078228	27.1563383600	n.a	n.a	n.a	n.a	
mm/stroke@peak torque	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	n.a.	n.a.	n.a.	n.a.	***************************************
6.Torque @ RPM (SEA Gross)	179.82 @ 1600	198.32 @ 1600	238.28 @ 1600	253.82 @ 1600	262.7 @ 1600	262.7 @ 1600	262.7 @ 1600	251.6 @ 1600	240.5 @ 1600	262.7 @ 1600	251.6 @ 1600	240.5 @ 1600	262.7 @ 1600	251.6 @ 1600	240.5 @ 1600	n.a.	n.a.	n.a.	n.a.	
(lbs/hr) @ peak HP (for diesels only)	20.636	23.919	27.671	30.954	33.6273	33.6273	33.9556	32,361	30.954	32.83	31.423	30.016	31.423	30.016	28.14	31.423	31.423	31.423	32.83	70 00
mm/stroke @ peak HP (for diesel only)	65	75	65	71	75	75	82	77	73	81	7.7	75	80	77	73	87	85	62	78	76
3.BHP@RPM ( Łu) (SAE Gross)	44 58.96	68.34	79.06	88.44	96.078	96.078	97.016	92.46	88.44	93.8	89.78	85.76	89.78	85.76	80.4	89.78	89.78	89.78	93.8	03.0
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2.Engine Model	BF3L914	BF3L914	BF4L914	BF4L914	BF4L914	BF4L914	BF4L914	BEAL 014												
1.Engine Code	CE 44	CE 51	CE 59	CE 66	CE71,7	CE71,7/1	, CE72,4	CE69	CE66/1	CE70	CE67	CE64	CE67/1	CE64/1	CE60	DE67	DE67/1	DE67/2	DE70	DE70/1