California Environmental Protection Agency AIR RESOURCES BOARD

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) 3000, 5000					
2004	4DZXL01.4029	1.37, 1.03	Diesel						
SPECIAL	FEATURES & EMISSION	CONTROL SYSTEMS	TYPICAL EQUIPMENT APPLICATION						
	Indirect Diesel Inje	ection	Loader, Tractor, Dozer, Pump, Compressor, Industrial Equipment						

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 8 < kW < 19	EMISSION			ŧ	XHAUST (g/kW-l	OPACITY (%)				
	STANDARD CATEGORY	STD	HC N/A	NOx N/A	NMHC+NOx	co	PM 0.80	ACCEL	LUG 15	PEAK 50
	Tier 1				9.5	6.6		20		
19 ≤ kW < 37	Tier 2	STD	N/A	N/A	7.5	5.5	0.60	20	15	50
		CERT	-	-	4.8	2.4	0.26	2	2	4

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.

This Executive Order hereby supersedes Executive Order U-R-013-0132 dated April 15, 2004

Executed at El Monte, California on this day of April 2004.

Mobile Source Operations Division

Attachment 1-P 1

4- K-013-0132 -- 1

Manufacturer: Deutz AG

Engine category: Nonroad CI

EPA Engine Family 4DZXL01.4029

Mfr Family Name: FM1008F

Process Code: New Submission

	4															
9.Emission Conirol Device Per SAE J1930	ī		I	i <u>c</u>		IQI	<u> </u>								<u> </u>	***************************************
8.Fuel Rate: (lbs/hr)@peak torque	7.58	7.52	7.34	7.34	FIXED SPEED	FIXED SPEED	10.25	6 30	0.30	930	0.00	8.38	9.17	FIXED SPEED	FIXED SPEED	
7.Fuel Rate: mm/stroke@peak lorque	21.7	21.5	21.0	21.0	FIXED SPEED	FIXED SPEED	21.0		210	210	20.8	21.0	20.7	FIXED SPEED	FIXED SPEED	
6.Torque @ RPM (SEA Gross)	47.2@2100	46.5@2100	45.7@2100	45.7@2100	FIXED SPEED	FIXED SPEED	57.5@2200	59.0@2000	59.0@2000	59.0@2000	57.5@2000	54.6@1800	55.7@2000	FIXED SPEED	FIXED SPEED	****** * *** *** *** *** *** * *** ***
5.Fuel Rate: (lbs/hr) @ peak HP (for diesets only)	12.70	10.47	11.88	11.53	5.60	12.70	16.51	15.83	15.37	13.29	12.54	11.20	10.76	7.78	12.96	
4.Fuel Rate: mm/stroke @ peak HP (for dlesel only)	21.2	21.0	21.0	21.0	18,7	21.2	20.7	21.0	21.0	20.0	20.2	20.2	20.2	19.5	19,5	•
3.BHP@RPM KW (SAE Gross)	26.1@3600	23.5@3000	25.7@3400	24.8@3300	I3.4@1800	26.1@3600	ıcs 34.2@3600	33.9@3400	32.9@3300	30.2@3000	29,1@2800	25.5@2500	24.8@2400	18.2@1800	29.5@3000	
2.Engine Model	F3M1008F	F3M1008F	F3M1008F	F3M1008F	F3M1008F #	F3M1008F	F4M1008F 1	F4M1008F	F4M1008F	F4M1008F	F4M1008F	F4M1008F	F4M1008F	F4M1008F	F4M1008F	
1.Engine Code		Andrews compress strategies de la beneau de compart (based les common égyp compresse en ,			Definition of the contract of			The second secon		demonstrate transfer and the second members and the second members are the second members and the second members are second members are second members and the second members are second			ter bernenge blet best blensengen i rede i e e e e e e e e e			