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	DEUTZ AG	<b>EXECUTIVE ORDER U-R-013-0064</b> New Off-Road Compression-Ignition Engines
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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-45-9;

**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)
2002	2DZX06.1028	4.0, 6.1	Diesel	8000
SPECIAL FEATURES & EMISSION CONTROL SYSTEMS			TYPICAL EQUIPMENT APPLICATION	
Direct Diesel Injection, Smoke Puff Limiter, Turbocharger, Charge Air Cooler			Loader, 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	EMISSION STANDARD CATEGORY		EXHAUST (g/kw-hr)					OPACITY (%)		
			HC	NOx	NMHC+NOx	CO	PM	ACCEL	LUG	PEAK
75≤kW<130	Tier 1	STD	N/A	9.2	N/A	N/A	N/A	20	15	50
130≤kW<225	Tier 1	STD	1.3	9.2	N/A	11.4	0.54	20	15	50
		CERT	0.8	8.3	-	0.9	0.13	4	0	16

**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 4<sup>TH</sup> day of March 2002.



Allen Lyons, Chief  
New Vehicle/Engine Programs Branch

ED# 4-12-013-0064  
attachment 1084

Engine Model and Part Number Summary Form

Manufacturer: DEUTZ AG  
Engine category: Nonroad CI  
EPA Engine Family: 2DZXL06.1028

Engine Code	Engine Model	BHP		BKW		Rated Power Engine Speed rpm	Injection rate at rated power ±6mm³/stroke	Peak torque ± 5% Nm	Speed at peak torque ± 200 rpm rpm	Injection rate at peak torque ±4mm³/stroke	Fuel injection pump description	Fuel injector description	Injection timing (±0.5°) °btdc	Speed governor, optionally description	Turbocharger description
		HP	kw	HP	kw										
C103	BF4M2012C	136	103.0	2500	90.0	493	1500	104	02112405KZ	02112605KY	8	EMR	S100-008H		
C98	BF4M2012C	131	98.0	2500	85.0	469	1500	99	02112405KZ	02112605KY	8	EMR	S100-008H		
C93	BF4M2012C	125	93.0	2500	81.0	445	1500	94	02112405KZ	02112605KY	8	EMR	S100-008H		
C88	BF4M2012C	118	88.0	2500	77.0	422	1500	89	02112405KZ	02112605KY	8	EMR	S100-008H		
C100	BF4M2012C	134	100.0	2400	89.0	493	1500	104	02112405KZ	02112605KY	8	EMR	S100-008H		
C95	BF4M2012C	127	95.0	2400	84.0	469	1500	99	02112405KZ	02112605KY	8	EMR	S100-008H		
C90	BF4M2012C	121	90.0	2400	80.0	445	1500	94	02112405KZ	02112605KY	8	EMR	S100-008H		
C85	BF4M2012C	114	85.0	2400	76.0	422	1500	89	02112405KZ	02112605KY	8	EMR	S100-008H		
C98/1	BF4M2012C	131	98.0	2300	90.0	493	1500	104	02112405KZ	02112605KY	8	EMR	S100-008H		
C93/1	BF4M2012C	125	93.0	2300	85.0	469	1500	99	02112405KZ	02112605KY	8	EMR	S100-008H		
C88/1	BF4M2012C	118	88.0	2300	81.0	445	1500	94	02112405KZ	02112605KY	8	EMR	S100-008H		
C83	BF4M2012C	111	83.0	2300	77.0	422	1500	89	02112405KZ	02112605KY	8	EMR	S100-008H		
C95/1	BF4M2012C	127	95.0	2200	90.0	493	1500	104	02112405KZ	02112605KY	7	EMR	S100-008H		
C90/1	BF4M2012C	121	90.0	2200	85.0	469	1500	99	02112405KZ	02112605KY	7	EMR	S100-008H		
C85/1	BF4M2012C	114	85.0	2200	81.0	445	1500	94	02112405KZ	02112605KY	7	EMR	S100-008H		
C81	BF4M2012C	109	81.0	2200	77.0	422	1500	89	02112405KZ	02112605KY	7	EMR	S100-008H		
C92	BF4M2012C	123	92.0	2100	90.0	493	1500	104	02112405KZ	02112605KY	7	EMR	S100-008H		
C87	BF4M2012C	117	87.0	2100	85.0	469	1500	99	02112405KZ	02112605KY	7	EMR	S100-008H		
C83/1	BF4M2012C	111	83.0	2100	81.0	445	1500	94	02112405KZ	02112605KY	7	EMR	S100-008H		
C78	BF4M2012C	105	78.0	2100	77.0	422	1500	89	02112405KZ	02112605KY	7	EMR	S100-008H		
C89	BF4M2012C	119	89.0	2000	91.0	493	1500	104	02112405KZ	02112605KY	7	EMR	S100-008H		
C84	BF4M2012C	113	84.0	2000	86.0	469	1500	99	02112405KZ	02112605KY	7	EMR	S100-008H		
C80	BF4M2012C	107	80.0	2000	82.0	445	1500	94	02112405KZ	02112605KY	7	EMR	S100-008H		
C75	BF4M2012C	101	75.0	2000	78.0	422	1500	89	02112405KZ	02112605KY	7	EMR	S100-008H		
C155	BF6M2012C	208	155.0	2500	89.0	743	1500	102	02112405KZ	02112605KY	8	EMR	04251373KZ		
C147	BF6M2012C	197	147.0	2500	84.0	705	1500	97	02112405KZ	02112605KY	8	EMR	04251373KZ		
C140	BF6M2012C	188	140.0	2500	80.0	671	1500	92	02112405KZ	02112605KY	8	EMR	04251373KZ		
C132	BF6M2012C	177	132.0	2500	76.0	633	1500	87	02112405KZ	02112605KY	8	EMR	04251373KZ		
C129	BF6M2012C	173	129.0	2500	75.0	633	1500	87	02112405KZ	02112605KY	8	EMR	04251373KZ		
C151	BF6M2012C	202	151.0	2400	89.0	743	1500	102	02112405KZ	02112605KY	8	EMR	04251373KZ		
C144	BF6M2012C	193	144.0	2400	84.0	705	1500	97	02112405KZ	02112605KY	8	EMR	04251373KZ		
C136	BF6M2012C	182	136.0	2400	80.0	671	1500	92	02112405KZ	02112605KY	8	EMR	04251373KZ		
C126	BF6M2012C	172	128.0	2400	76.0	633	1500	87	02112405KZ	02112605KY	8	EMR	04251373KZ		

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Engine Model and Part Number Summary Form

Manufacturer: DEUTZ AG  
Engine category: Nonroad CI  
EPA Engine Family: 2DZXL06.1028

Engine Code	Engine Model	BHP		BkW		Rated Power Engine Speed rpm	Injection rate at rated power ±6mm³		Peak torque ± 5%		Speed at peak torque ± 200 rpm		Injection rate at peak torque ±4mm³		Fuel injection pump		Fuel injector		Injection timing (±0.5°)		Speed governor, optionally		Turbocharger	
		HP	KW	KW	rpm		mm³/stroke	stroke	Nm	rpm	mm³/stroke	stroke	description	description	°btdc	description	description							
C147/1	BF6M2012C	197	147.0	147.0	2300	89.0	89.0	743	1500	102	02112405KZ	02112605KY	8	EMR	04251373KZ									
C140/1	BF6M2012C	188	140.0	140.0	2300	84.0	84.0	705	1500	97	02112405KZ	02112605KY	8	EMR	04251373KZ									
C132/1	BF6M2012C	177	132.0	132.0	2300	80.0	80.0	671	1500	92	02112405KZ	02112605KY	8	EMR	04251373KZ									
C125	BF6M2012C	168	125.0	125.0	2300	76.0	76.0	633	1500	87	02112405KZ	02112605KY	8	EMR	04251373KZ									
C143	BF6M2012C	192	143.0	143.0	2200	89.0	89.0	743	1500	103	02112405KZ	02112605KY	7	EMR	04251373KZ									
C136/1	BF6M2012C	182	136.0	136.0	2200	84.0	84.0	705	1500	98	02112405KZ	02112605KY	7	EMR	04251373KZ									
C128/1	BF6M2012C	172	128.0	128.0	2200	80.0	80.0	671	1500	93	02112405KZ	02112605KY	7	EMR	04251373KZ									
C121	BF6M2012C	162	121.0	121.0	2200	76.0	76.0	633	1500	88	02112405KZ	02112605KY	7	EMR	04251373KZ									
C138	BF6M2012C	185	138.0	138.0	2100	89.0	89.0	743	1500	103	02112405KZ	02112605KY	7	EMR	04251373KZ									
C131	BF6M2012C	176	131.0	131.0	2100	84.0	84.0	705	1500	98	02112405KZ	02112605KY	7	EMR	04251373KZ									
C124	BF6M2012C	166	124.0	124.0	2100	80.0	80.0	671	1500	93	02112405KZ	02112605KY	7	EMR	04251373KZ									
C118	BF6M2012C	158	118.0	118.0	2100	76.0	76.0	633	1500	88	02112405KZ	02112605KY	7	EMR	04251373KZ									
C134	BF6M2012C	180	134.0	134.0	2000	90.0	90.0	743	1500	103	02112405KZ	02112605KY	7	EMR	04251373KZ									
C127	BF6M2012C	170	127.0	127.0	2000	85.0	85.0	705	1500	98	02112405KZ	02112605KY	7	EMR	04251373KZ									
C120	BF6M2012C	161	120.0	120.0	2000	81.0	81.0	671	1500	93	02112405KZ	02112605KY	7	EMR	04251373KZ									
C114	BF6M2012C	153	114.0	114.0	2000	77.0	77.0	633	1500	88	02112405KZ	02112605KY	7	EMR	04251373KZ									
VOLVO TYPEN																								
C103	TAD420VE	138	103.0	103.0	2500	90.0	90.0	493	1500	104	02112405KZ	02112605KY	8	EMR	S100-008H									
C93	TAD420VE	125	93.0	93.0	2500	81.0	81.0	445	1500	94	02112405KZ	02112605KY	8	EMR	S100-008H									
C98/1	TAD420VE	131	98.0	98.0	2300	90.0	90.0	493	1500	104	02112405KZ	02112605KY	8	EMR	S100-008H									
C88/1	TAD420VE	118	88.0	88.0	2300	81.0	81.0	445	1500	94	02112405KZ	02112605KY	8	EMR	S100-008H									
C92	TAD420VE	123	92.0	92.0	2100	90.0	90.0	493	1500	104	02112405KZ	02112605KY	7	EMR	S100-008H									
C83/1	TAD420VE	111	83.0	83.0	2100	81.0	81.0	445	1500	94	02112405KZ	02112605KY	7	EMR	S100-008H									
C155	TAD620VE	208	155.0	155.0	2500	90.0	90.0	700	1500	104	02112405KZ	02112605KY	8	EMR	04251373KZ									
C140	TAD620VE	188	140.0	140.0	2500	81.0	81.0	671	1500	94	02112405KZ	02112605KY	8	EMR	04251373KZ									
C145	TAD620VE	194	145.0	145.0	2300	90.0	90.0	700	1500	104	02112405KZ	02112605KY	8	EMR	04251373KZ									
C131	TAD620VE	176	131.0	131.0	2300	81.0	81.0	671	1500	94	02112405KZ	02112605KY	8	EMR	04251373KZ									
C135	TAD620VE	181	135.0	135.0	2100	90.0	90.0	700	1500	104	02112405KZ	02112605KY	7	EMR	04251373KZ									
C121	TAD620VE	162	121.0	121.0	2100	81.0	81.0	671	1500	94	02112405KZ	02112605KY	7	EMR	04251373KZ									
COM-2																								
CE103	BF4M2012C	138	103.0	103.0	2500	91.0	91.0	493	1500	104	02112405KZ	02112605KY	4	EMR	S100-008H									
CE98	BF4M2012C	131	98.0	98.0	2500	90.0	90.0	469	1500	101	02112405KZ	02112605KY	4	EMR	S100-008H									
CE93	BF4M2012C	125	93.0	93.0	2500	85.0	85.0	445	1500	96	02112405KZ	02112605KY	4	EMR	S100-008H									

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Engine Model and Part Number Summary Form

Manufacturer: DEUTZ AG  
Engine category: Nonroad CI  
EPA Engine Family: 202XL06.1028

Engine Code	Engine Model	BHP		BkW		Rated Power Engine Speed rpm	Injection rate at rated power ±6mm³ mm³/stroke	Peak torque ± 5% Nm	Speed at peak torque ± 200 rpm rpm	Injection rate at peak torque ±4mm³ mm³/stroke	Fuel injection pump description	Fuel injector description	Injection timing (±0.5°) °btdc	Speed governor, optionally description	Turbocharger description
		HP	KW	kW	kW										
CE88	BF4M2012C	118	88.0	88.0	2500	80.0	422	1500	91	02112405KZ	02112605KY	4	EMR	S100-008H	
CE100	BF4M2012C	134	100.0	100.0	2400	91.0	493	1500	104	02112405KZ	02112605KY	3	EMR	S100-008H	
CE95	BF4M2012C	127	95.0	95.0	2400	89.0	469	1500	101	02112405KZ	02112605KY	3	EMR	S100-008H	
CE90	BF4M2012C	121	90.0	90.0	2400	84.0	445	1500	96	02112405KZ	02112605KY	3	EMR	S100-008H	
CE85	BF4M2012C	114	85.0	85.0	2400	79.0	422	1500	91	02112405KZ	02112605KY	3	EMR	S100-008H	
CE98/1	BF4M2012C	131	98.0	98.0	2300	91.0	493	1500	104	02112405KZ	02112605KY	3	EMR	S100-008H	
CE93/1	BF4M2012C	125	93.0	93.0	2300	89.0	469	1500	101	02112405KZ	02112605KY	3	EMR	S100-008H	
CE88/1	BF4M2012C	118	88.0	88.0	2300	84.0	445	1500	96	02112405KZ	02112605KY	3	EMR	S100-008H	
CE83	BF4M2012C	111	83.0	83.0	2300	80.0	422	1500	91	02112405KZ	02112605KY	3	EMR	S100-008H	
CE95/1	BF4M2012C	127	95.0	95.0	2200	91.0	493	1500	104	02112405KZ	02112605KY	2	EMR	S100-008H	
CE90/1	BF4M2012C	121	90.0	90.0	2200	89.0	469	1500	101	02112405KZ	02112605KY	2	EMR	S100-008H	
CE85/1	BF4M2012C	114	85.0	85.0	2200	85.0	445	1500	96	02112405KZ	02112605KY	2	EMR	S100-008H	
CE81	BF4M2012C	109	81.0	81.0	2200	80.0	422	1500	91	02112405KZ	02112605KY	2	EMR	S100-008H	
CE92	BF4M2012C	123	92.0	92.0	2100	91.0	493	1500	104	02112405KZ	02112605KY	2	EMR	S100-008H	
CE87	BF4M2012C	117	87.0	87.0	2100	89.0	469	1500	101	02112405KZ	02112605KY	2	EMR	S100-008H	
CE83/1	BF4M2012C	111	83.0	83.0	2100	85.0	445	1500	96	02112405KZ	02112605KY	2	EMR	S100-008H	
CE78	BF4M2012C	105	78.0	78.0	2100	80.0	422	1500	91	02112405KZ	02112605KY	2	EMR	S100-008H	
CE89	BF4M2012C	119	89.0	89.0	2000	91.0	493	1500	104	02112405KZ	02112605KY	2	EMR	S100-008H	
CE84	BF4M2012C	113	84.0	84.0	2000	90.0	469	1500	101	02112405KZ	02112605KY	2	EMR	S100-008H	
CE80	BF4M2012C	107	80.0	80.0	2000	85.0	445	1500	96	02112405KZ	02112605KY	2	EMR	S100-008H	
CE75	BF4M2012C	101	75.0	75.0	2000	80.0	422	1500	91	02112405KZ	02112605KY	2	EMR	S100-008H	
CE155	BF6M2012C	208	155.0	155.0	2500	91.0	743	1500	104	02112405KZ	02112605KY	4	EMR	S200-043Q	
CE147	BF6M2012C	197	147.0	147.0	2500	88.0	705	1500	100	02112405KZ	02112605KY	4	EMR	S200-043Q	
CE140	BF6M2012C	188	140.0	140.0	2500	83.0	671	1500	95	02112405KZ	02112605KY	4	EMR	S200-043Q	
CE132	BF6M2012C	177	132.0	132.0	2500	79.0	633	1500	89	02112405KZ	02112605KY	4	EMR	S200-043Q	
CE151	BF6M2012C	202	151.0	151.0	2400	91.0	743	1500	104	02112405KZ	02112605KY	3	EMR	S200-043Q	
CE144	BF6M2012C	193	144.0	144.0	2400	88.0	705	1500	100	02112405KZ	02112605KY	3	EMR	S200-043Q	
CE136	BF6M2012C	182	136.0	136.0	2400	83.0	671	1500	95	02112405KZ	02112605KY	3	EMR	S200-043Q	
CE128	BF6M2012C	172	128.0	128.0	2400	79.0	633	1500	89	02112405KZ	02112605KY	3	EMR	S200-043Q	
CE147/1	BF6M2012C	197	147.0	147.0	2300	91.0	743	1500	104	02112405KZ	02112605KY	3	EMR	S200-043Q	
CE140/1	BF6M2012C	188	140.0	140.0	2300	88.0	705	1500	100	02112405KZ	02112605KY	3	EMR	S200-043Q	
CE132/1	BF6M2012C	177	132.0	132.0	2300	83.0	671	1500	95	02112405KZ	02112605KY	3	EMR	S200-043Q	
CE125	BF6M2012C	168	125.0	125.0	2300	79.0	633	1500	89	02112405KZ	02112605KY	3	EMR	S200-043Q	
CE143	BF6M2012C	192	143.0	143.0	2200	91.0	743	1500	104	02112405KZ	02112605KY	2	EMR	S200-043Q	

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Engine Model and Part Number Summary Form

Manufacturer: DEUTZ AG  
 Engine category: Nonroad CI  
 EPA Engine Family: 2DZXL06.1028

Engine Code	Engine Model	BHP		Rated Power Engine Speed	Injection rate at rated power		Peak torque		Speed at peak torque		Injection rate at peak torque		Fuel injection pump	Fuel injector	Injection timing (±0.5°)	Speed governor, optionally	Turbocharger
		HP	kW		Nm	stroke	mm <sup>3</sup> /stroke	rpm	stroke	mm <sup>3</sup> /stroke							
CE136/1	BF6M2012C	182	136.0	2200	88.0	705	100	02112405KZ	02112605KY	2	EMR	S200-043Q					
CE128/1	BF6M2012C	172	128.0	2200	83.0	671	95	02112405KZ	02112605KY	2	EMR	S200-043Q					
CE121	BF6M2012C	162	121.0	2200	79.0	633	89	02112405KZ	02112605KY	2	EMR	S200-043Q					
CE138	BF6M2012C	185	138.0	2100	91.0	743	104	02112405KZ	02112605KY	2	EMR	S200-043Q					
CE131	BF6M2012C	176	131.0	2100	88.0	705	100	02112405KZ	02112605KY	2	EMR	S200-043Q					
CE124	BF6M2012C	166	124.0	2100	83.0	671	95	02112405KZ	02112605KY	2	EMR	S200-043Q					
CE118	BF6M2012C	158	118.0	2100	79.0	633	89	02112405KZ	02112605KY	2	EMR	S200-043Q					
CE134	BF6M2012C	180	134.0	2000	91.0	743	104	02112405KZ	02112605KY	2	EMR	S200-043Q					
CE127	BF6M2012C	170	127.0	2000	89.0	705	100	02112405KZ	02112605KY	2	EMR	S200-043Q					
CE120	BF6M2012C	161	120.0	2000	84.0	671	95	02112405KZ	02112605KY	2	EMR	S200-043Q					
CE114	BF6M2012C	153	114.0	2000	80.0	633	89	02112405KZ	02112605KY	2	EMR	S200-043Q					
CE103	TAD420VE	138	103.0	2500	91.0	493	104	02112405KZ	02112605KY	4	EMR	S100-008H					
CE93	TAD420VE	125	93.0	2500	85.0	445	96	02112405KZ	02112605KY	4	EMR	S100-008H					
CE98/1	TAD420VE	131	98.0	2300	91.0	493	104	02112405KZ	02112605KY	3	EMR	S100-008H					
CE88/1	TAD420VE	118	88.0	2300	84.0	445	96	02112405KZ	02112605KY	3	EMR	S100-008H					
CE92	TAD420VE	123	92.0	2100	91.0	493	104	02112405KZ	02112605KY	2	EMR	S100-008H					
CE83/1	TAD420VE	111	83.0	2100	85.0	445	96	02112405KZ	02112605KY	2	EMR	S100-008H					
CE155	TAD620VE	208	155.0	2500	93.0	700	103	02112405KZ	02112605KY	4	EMR	S200-043Q					
CE140	TAD620VE	188	140.0	2500	84.0	671	92	02112405KZ	02112605KY	4	EMR	S200-043Q					
CE145	TAD620VE	194	145.0	2300	92.0	700	103	02112405KZ	02112605KY	3	EMR	S200-043Q					
CE131	TAD620VE	176	131.0	2300	83.0	671	92	02112405KZ	02112605KY	3	EMR	S200-043Q					
CE135/1	TAD620VE	181	135.0	2100	90.0	700	103	02112405KZ	02112605KY	2	EMR	S200-043Q					
CE121	TAD620VE	162	121.0	2100	81.0	671	92	02112405KZ	02112605KY	2	EMR	S200-043Q					