California Environmental Protection Agency AIR RESOURCES BOARD	DEUTZ AG	EXECUTIVE ORDER U-R-013-0062 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-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	2DZXL04.8007	3.2, 4.8	Diesel	8000

SPECIAL FEATURES & EMISSION CONTROL SYSTEMS	TYPICAL EQUIPMENT APPLICATION
Direct Diesel Injection, Smoke Puff Limiter, Turbocharger	Pump, Generator Set, 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
37≤kW<75	Tier 1	STD	N/A	9.2	N/A	N/A	N/A	20	15	50
75≤kW<130	Tier 1	STD	N/A	9.2	N/A	N/A	N/A	20	15	50
		CERT	-	8.8	-	-	-	3	3	3

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 28TH day of February 2002.

Allen Lyons, Chief
New Vehicle/Engine Programs Branch

EOAU-K-013-0062

Attachment 1 of 4

Manufacturer: DEUTZ AG
Engine category: Nonroad CI
EPA Engine Family: 2DZXLO4.8007

Engine Model and Part Number Summary Form

Engine code	Engine Model	BHP	BkW	Rated Power Engine Speed	Injection rate at rated power ±6mm³	Peak torque ± 5%	Speed at peak torque ± 100 rpm	Injection rate at peak torque ±4mm³	Fuel injection pump	Fuel injector	Injection timing (±1°)	Smoke limiter, part of speed governor, - 5mm³	Turbocharger
		HP	kW	rpm	mm³/ stroke	Nm	rpm	mm³/ stroke	part number	description	°btdc	mm³/ stroke - rpm	description
C98	BF6M1012	131	98	2500	63	447	1500	68	02111636KZ	02126844KZ	7	58-800	S2A150E
C93	BF6M1012	125	93	2500	60	424	1500	64	02111636KZ	02126844KZ	7	58-800	S2A150E
C88	BF6M1012	118	88	2500	57	402	1500	60	02111636KZ	02126844KZ	7	58-800	S2A150E
C83	BF6M1012	111	83	2500	54	379	1500	57	02111636KZ	02126844KZ	7	58-800	S2A150E
C95/1	BF6M1012	127	95	2400	62	447	1500	68	02111636KZ	02126844KZ	7	58-800	S2A150E
C92	BF6M1012	123	92	2300	63	447	1500	68	02111636KZ	02126846KZ	6	58-800	S2A150E
C87	BF6M1012	117	87	2300	60	424	1500	64	02111636KZ	02126846KZ	6	58-800	S2A150E
C83/1	BF6M1012	111	83	2300	57	402	1500	60	02111636KZ	02126846KZ	6	58-800	S2A150E
C78	BF6M1012	105	78	2300	54	379	1500	57	02111636KZ	02126846KZ	6	58-800	S2A150E
C89	BF6M1012	119	89	2200	63	447	1500	68	02111636KZ	02126846KZ	6	58-800	S2A150E
C84	BF6M1012	113	84	2200	59	424	1500	64	02111636KZ	02126846KZ	6	58-800	S2A150E
C80	BF6M1012	107	80	2200	56	402	1500	60	02111636KZ	02126846KZ	6	58-800	S2A150E
C76	BF6M1012	102	76	2200	53	379	1500	57	02111636KZ	02126846KZ	6	58-800	S2A150E
C85	BF6M1012	114	85	2100	61	447	1500	68	02111636KZ	02126846KZ	6	58-800	S2A150E
C82	BF6M1012	110	82	2100	58	424	1500	64	02111636KZ	02126846KZ	6	58-800	S2A150E
C78/1	BF6M1012	105	78	2100	56	402	1500	60	02111636KZ	02126846KZ	6	58-800	S2A150E
C74	BF6M1012	99	74	2100	53	379	1500	57	02111636KZ	02126846KZ	6	58-800	S2A150E
C82/1	BF6M1012	110	82	2000	60	447	1500	68	02111636KZ	02126846KZ	6	58-800	S2A150C
C79	BF6M1012	106	79	2000	59	424	1500	64	02111636KZ	02126846KZ	6	58-800	S2A150C
C75	BF6M1012	101	75	2000	56	402	1500	60	02111636KZ	02126846KZ	6	58-800	S2A150C
C71	BF6M1012	95	71	2000	53	379	1500	57	02111636KZ	02126846KZ	6	58-800	S2A150C
D95	BF6M1012	127	95	2400	62	n. a.	n. a.	n. a.	02111636KZ	02126844KZ	7	n. a.	S2A150E
D86	BF6M1012	115	86	2400	52	n. a.	n. a.	n. a.	02111636KZ	02126844KZ	7	n. a.	S2A150E
D88	BF6M1012	118	88	2000	54	n. a.	n. a.	n. a.	02111636KZ	02126844KZ	6	n. a.	S2A150C
D80	BF6M1012	107	80	2000	48	n. a.	n. a.	n. a.	02111636KZ	02126844KZ	6	n. a.	S2A150C
D83	BF6M1012	111	83	1846	50	n. a.	n. a.	n. a.	02111636KZ	02126844KZ	6	n. a.	S2A150C
D75	BF6M1012	101	75	1846	47	n. a.	n. a.	n. a.	02111636KZ	02126844KZ	6	n. a.	S2A150C
D78	BF6M1012	105	78	1800	48	n. a.	n. a.	n. a.	02111636KZ	02126846KZ	6	n. a.	S2A157B
D76	BF6M1012	102	76	1800	46	n. a.	n. a.	n. a.	02111636KZ	02126846KZ	6	n. a.	S2A157B
D72/1	BF6M1012	96	72	1800	58	n. a.	n. a.	n. a.	02111636KZ	02126846KZ	6	n. a.	S2A157B
C65	BF4M1012	87	65	2500	64	298	1500	70	02111636KZ	02126844KZ	7	58-800	S1BS010F
C62	BF4M1012	83	62	2500	61	284	1500	66	02111636KZ	02126844KZ	7	58-800	S1BS010F
C58/2	BF4M1012	78	58	2500	57	266	1500	61	02111636KZ	02126844KZ	7	58-800	S1BS010F

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Manufacturer: DEUTZ AG
Engine category: Nonroad CI
EPA Engine Family: 2DZXLO4.8007

Engine Model and Part Number Summary Form

Engine code	Engine Model	BHP	BkW	Rated Power Engine Speed	Injection rate at rated power ±6mm³	Peak torque ± 5%	Speed at peak torque ± 100 rpm	Injection rate at peak torque ±4mm³	Fuel injection pump	Fuel injector	Injection timing (±1°)	Smoke limiter, part of speed governor, - 5mm³	Turbocharger
		HP	kW	rpm	mm³/ stroke	Nm	rpm	mm³/ stroke	part number	description	°btdc	mm³/ stroke - rpm	description
C55	BF4M1012	74	55	2500	54	252	1500	58	02111636KZ	02126844KZ	7	58-800	S1BS010F
C63/1	BF4M1012	84	63	2400	64	298	1500	70	02111636KZ	02126844KZ	7	58-800	S1BS010F
C61	BF4M1012	82	61	2300	62	298	1500	70	02111636KZ	02126846KZ	6	58-800	S1BS010F
C58/1	BF4M1012	78	58	2300	59	284	1500	66	02111636KZ	02126846KZ	6	58-800	S1BS010F
C55/1	BF4M1012	74	55	2300	56	266	1500	61	02111636KZ	02126846KZ	6	58-800	S1BS010F
C52	BF4M1012	70	52	2300	53	252	1500	58	02111636KZ	02126846KZ	6	58-800	S1BS010F
C59	BF4M1012	79	59	2200	62	298	1500	70	02111636KZ	02126846KZ	6	58-800	S1BS010F
C56	BF4M1012	75	56	2200	58	284	1500	66	02111636KZ	02126846KZ	6	58-800	S1BS010F
C53	BF4M1012	71	53	2200	55	266	1500	61	02111636KZ	02126846KZ	6	58-800	S1BS010F
C51	BF4M1012	68	51	2200	53	252	1500	58	02111636KZ	02126846KZ	6	58-800	S1BS010F
C57	BF4M1012	76	57	2100	62	298	1500	70	02111636KZ	02126846KZ	6	58-800	S1BS010F
C54	BF4M1012	72	54	2100	58	284	1500	66	02111636KZ	02126846KZ	6	58-800	S1BS010F
C52/1	BF4M1012	70	52	2100	56	266	1500	61	02111636KZ	02126846KZ	6	58-800	S1BS010F
C49	BF4M1012	66	49	2100	53	252	1500	58	02111636KZ	02126846KZ	6	58-800	S1BS010F
C46	BF4M1012	62	46	2100	53	252	1500	58	02111636KZ	02126846KZ	6	58-800	S1BS010F
C55/2	BF4M1012	74	55	2000	62	298	1500	70	02111636KZ	02126846KZ	6	58-800	S1BS010D
C52/2	BF4M1012	70	52	2000	59	284	1500	66	02111636KZ	02126846KZ	6	58-800	S1BS010D
C50	BF4M1012	67	50	2000	57	266	1500	61	02111636KZ	02126846KZ	6	58-800	S1BS010D
C47	BF4M1012	63	47	2000	54	252	1500	58	02111636KZ	02126846KZ	6	58-800	S1BS010D
D63	BF4M1012	84	63	2400	66	n. a.	n. a.	n. a.	02111636KZ	02126844KZ	7	n. a.	S1BS010F
D57	BF4M1012	76	57	2400	60	n. a.	n. a.	n. a.	02111636KZ	02126844KZ	7	n. a.	S1BS010F
D58	BF4M1012	78	58	2000	65	n. a.	n. a.	n. a.	02111636KZ	02126844KZ	6	n. a.	S1BS010D
D53	BF4M1012	71	53	2000	60	n. a.	n. a.	n. a.	02111636KZ	02126844KZ	6	n. a.	S1BS010D
D55	BF4M1012	74	55	1846	67	n. a.	n. a.	n. a.	02111636KZ	02126844KZ	6	n. a.	S1BS010D
D50	BF4M1012	67	50	1846	61	n. a.	n. a.	n. a.	02111636KZ	02126844KZ	6	n. a.	S1BS010D
D52	BF4M1012	70	52	1800	65	n. a.	n. a.	n. a.	02111636KZ	02126846KZ	7	n. a.	S1BS010D
D49	BF4M1012	66	49	1800	61	n. a.	n. a.	n. a.	02111636KZ	02126846KZ	7	n. a.	S1BS010D
D47	BF4M1012	63	47	1800	59	n. a.	n. a.	n. a.	02111636KZ	02126846KZ	7	n. a.	S1BS010D
C100	BF6M1012E	134	100	2500	63	450	1500	68	02111636KZ	02126844KZ	7	58-800	S2A150E
C95	BF6M1012E	127	95	2500	60	427	1500	64	02111636KZ	02126844KZ	7	58-800	S2A150E
C90	BF6M1012E	121	90	2500	57	405	1500	60	02111636KZ	02126844KZ	7	58-800	S2A150E
C85/1	BF6M1012E	114	85	2500	54	382	1500	57	02111636KZ	02126844KZ	7	58-800	S2A150E
C92/1	BF6M1012E	123	92	2400	60	427	1500		02111636KZ	02126844KZ	7	56-800	S2A150E

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Manufacturer: DEUTZ AG
Engine category: Nonroad CI
EPA Engine Family: 2DZXLO4.8007

Engine Model and Part Number Summary Form

Engine code	Engine Model	BHP	BkW	Rated Power Engine Speed	Injection rate at rated power ±6mm³	Peak torque ± 5%	Speed at peak torque ± 100 rpm	Injection rate at peak torque ±4mm³	Fuel injection pump	Fuel injector	Injection timing (±1°)	Smoke limiter, part of speed governor, - 5mm³	Turbocharger
		HP	kW	rpm	mm³/ stroke	Nm	rpm	mm³/ stroke	part number	description	°btdc	mm³/ stroke - rpm	description
C94	BF6M1012E	126	94	2300	63	450	1500	68	02111636KZ	02126846KZ	6	58-800	S2A150E
C89/1	BF6M1012E	119	89	2300	60	427	1500	64	02111636KZ	02126846KZ	6	58-800	S2A150E
C85/2	BF6M1012E	114	85	2300	57	439	1500	60	02111636KZ	02126846KZ	6	58-800	S2A150E
C80/1	BF6M1012E	107	80	2300	54	382	1500	57	02111636KZ	02126846KZ	6	58-800	S2A150E
C74/1	BF6M1012E	99	74	2300	50	400	1600	60	02111636KZ	02126846KZ	6	58-800	S2A150C
C90/1	BF6M1012E	121	90	2200	63	450	1500	68	02111636KZ	02126846KZ	6	58-800	S2A150E
C85/3	BF6M1012E	114	85	2200	59	427	1500	64	02111636KZ	02126846KZ	6	58-800	S2A150E
C85/4	BF6M1012E	114	85	2200	59	430	1300	65	02111246KZ	02126842KZ	6	58-800	S2A159B
C81	BF6M1012E	109	81	2200	56	405	1500	60	02111636KZ	02126846KZ	6	58-800	S2A150E
C77/1	BF6M1012E	103	77	2200	53	382	1500	57	02111636KZ	02126846KZ	6	58-800	S2A150E
C86	BF6M1012E	115	86	2100	61	450	1500	68	02111636KZ	02126846KZ	6	58-800	S2A150E
C83/2	BF6M1012E	111	83	2100	58	427	1500	64	02111636KZ	02126846KZ	6	58-800	S2A150E
C79/1	BF6M1012E	106	79	2100	56	405	1500	60	02111636KZ	02126846KZ	6	58-800	S2A150E
C75/1	BF6M1012E	101	75	2100	53	382	1500	57	02111636KZ	02126846KZ	6	58-800	S2A150E
C80/2	BF6M1012E	107	80	2000	59	427	1500	64	02111636KZ	02126846KZ	6	58-800	S2A150C
C76/1	BF6M1012E	102	76	2000	56	405	1500	60	02111636KZ	02126846KZ	6	58-800	S2A150C
C72	BF6M1012E	96	72	2000	53	382	1500	57	02111636KZ	02126846KZ	6	58-800	S2A150C
D97/1	BF6M1012E	130	97	2400	62	n. a.	n. a.	n. a.	02111636KZ	02126844KZ	7	n. a.	S2A150E
D88/1	BF6M1012E	118	88	2400	60	n. a.	n. a.	n. a.	02111636KZ	02126844KZ	7	n. a.	S2A150E
D89	BF6M1012E	119	89	2000	61	n. a.	n. a.	n. a.	02111636KZ	02126844KZ	6	n. a.	S2A150C
D81	BF6M1012E	109	81	2000	56	n. a.	n. a.	n. a.	02111636KZ	02126844KZ	6	n. a.	S2A150C
D84	BF6M1012E	113	84	1846	58	n. a.	n. a.	n. a.	02111636KZ	02126844KZ	6	n. a.	S2A150C
D76/1	BF6M1012E	102	76	1846	54	n. a.	n. a.	n. a.	02111636KZ	02126844KZ	6	n. a.	S2A150C
D79	BF6M1012E	106	79	1800	55	n. a.	n. a.	n. a.	02111636KZ	02126846KZ	7	n. a.	S2A157B
D76/2	BF6M1012E	102	76	1800	54	n. a.	n. a.	n. a.	02111636KZ	02126846KZ	7	n. a.	S2A157B
D72	BF6M1012E	96	72	1800	58	n. a.	n. a.	n. a.	02111636KZ	02126846KZ	7	n. a.	S2A157B
C66	BF4M1012E	88	66	2500	64	300	1500-170(	70	02111636KZ	02126844KZ	7	58-800	S1BS010F
C63	BF4M1012E	84	63	2500	61	286	1500	66	02111636KZ	02126844KZ	7	58-800	S1BS010F
C59/1	BF4M1012E	79	59	2500	57	268	1500	61	02111636KZ	02126844KZ	7	58-800	S1BS010F
C56/1	BF4M1012E	75	56	2500	54	254	1600	58	02111636KZ	02126844KZ	7	58-800	S1BS010F
C62/2	BF4M1012E	83	62	2300	62	324	1500	75	02111636KZ	02126846KZ	6	58-800	S1BS010D
C62/1	BF4M1012E	83	62	2300	62	300	1500	70	02111636KZ	02126846KZ	6	58-800	S1BS010F
C59,5	BF4M1012E	80	59.5	2300	62	286	1500	66	02111636KZ	02126846KZ	6	56-800	S1BS010F

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Manufacturer: DEUTZ AG
Engine category: Nonroad CI
EPA Engine Family: 2DZXLO4.8007

Engine Model and Part Number Summary Form

Engine code	Engine Model	BHP	BkW	Rated Power Engine Speed	Injection rate at rated power ±6mm³	Peak torque ± 5%	Speed at peak torque ± 100 rpm	Injection rate at peak torque ±4mm³	Fuel injection pump	Fuel injector	Injection timing (±1°)	Smoke limiter, part of speed governor, - 5mm³	Turbocharger
		HP	kW	rpm	mm³/ stroke	Nm	rpm	mm³/ stroke	part number	description	°btdc	mm³/ stroke - rpm	description
C59/2	BF4M1012E	79	59	2300	59	286	1500	66	02111636KZ	02126846KZ	6	58-800	S1BS010F
C58/3	BF4M1012E	78	58	2300	58	286	1500	66	02111636KZ	02126846KZ	6	58-800	S1BS010F
C56/2	BF4M1012E	75	56	2300	56	268	1500	61	02111636KZ	02126846KZ	6	58-800	S1BS010F
C55/6	BF4M1012E	74	55	2300	55	292	1600	66	02111636KZ	02126846KZ	6	58-800	S1BS010D
C60/1	BF4M1012E	80	60	2200	62	300	1500	70	02111246KZ	02126846KZ	10	58-800	S1BS010F
C60	BF4M1012E	80	60	2200	62	300	1500	70	02111636KZ	02126846KZ	6	58-800	S1BS010F
C60/2	BF4M1012E	80	60	2200	62	300	1500	70	02111636KZ	02126846KZ	6	58-800	S1BS010D
C57/1	BF4M1012E	76	57	2200	58	286	1500	66	02111636KZ	02126846KZ	6	58-800	S1BS010F
C54/1	BF4M1012E	72	54	2200	55	268	1500	61	02111636KZ	02126846KZ	6	58-800	S1BS010F
C53/5	BF4M1012E	71	53	2200	55	241	1500	56	02111636KZ	02126846KZ	6	58-800	S1BS010D
C53/4	BF4M1012E	71	53	2200	55	268	1500	61	02111636KZ	02126846KZ	6	58-800	S1BS010F
C52/3	BF4M1012E	70	52	2200	53	254	1500	58	02111636KZ	02126846KZ	6	58-800	S1BS010F
C58	BF4M1012E	78	58	2100	62	300	1500	70	02111636KZ	02126846KZ	6	58-800	S1BS010F
C55/5	BF4M1012E	74	55	2100	58	286	1500	66	02111636KZ	02126846KZ	6	58-800	S1BS010F
C53/2	BF4M1012E	71	53	2100	56	286	1500	61	02111636KZ	02126846KZ	6	58-800	S1BS010F
C50/1	BF4M1012E	67	50	2100	53	268	1500	58	02111636KZ	02126846KZ	6	58-800	S1BS010F
C53/3	BF4M1012E	71	53	2000	59	286	1500	66	02111636KZ	02126846KZ	6	58-800	S1BS010D
C51/1	BF4M1012E	68	51	2000	57	268	1500	61	02111636KZ	02126846KZ	6	58-800	S1BS010D
C48	BF4M1012E	64	48	2000	54	254	1500	58	02111636KZ	02126846KZ	6	58-800	S1BS010D
D64	BF4M1012E	86	64	2400	67	n. a.	n. a.	n. a.	02111636KZ	02126844KZ	7	n. a.	S1BS010F
D58/1	BF4M1012E	78	58	2400	61	n. a.	n. a.	n. a.	02111636KZ	02126844KZ	7	n. a.	S1BS010F
D59/1	BF4M1012E	79	59	2000	67	n. a.	n. a.	n. a.	02111636KZ	02126844KZ	6	n. a.	S1BS010D
D54/1	BF4M1012E	72	54	2000	61	n. a.	n. a.	n. a.	02111636KZ	02126844KZ	6	n. a.	S1BS010D
D56/1	BF4M1012E	75	56	1846	68	n. a.	n. a.	n. a.	02111636KZ	02126844KZ	6	n. a.	S1BS010D
D51	BF4M1012E	68	51	1846	62	n. a.	n. a.	n. a.	02111636KZ	02126844KZ	6	n. a.	S1BS010D
D61	BF4M1012E	82	61	1800	76	n. a.	n. a.	n. a.	02111636KZ	02126844KZ	6	n. a.	S1B012C
D59/2	BF4M1012E	79	59	1800	74	n. a.	n. a.	n. a.	02111636KZ	02126844KZ	6	n. a.	S1B012C
D59/3	BF4M1012E	79	59	1800	74	n. a.	n. a.	n. a.	02111636KZ	02126844KZ	6	n. a.	S1B012C
D56/2	BF4M1012E	75	56	1800	70	n. a.	n. a.	n. a.	02111636KZ	02126844KZ	6	n. a.	S1B012C
D54/2	BF4M1012E	72	54	1800	68	n. a.	n. a.	n. a.	02111636KZ	02126844KZ	6	n. a.	S1B012C
D53/2	BF4M1012E	71	53	1800	66	n. a.	n. a.	n. a.	02111636KZ	02126846KZ	7	n. a.	S1BS010D
D50/2	BF4M1012E	67	50	1800	63	n. a.	n. a.	n. a.	02111636KZ	02126846KZ	7	n. a.	S1BS010D
D48/1	BF4M1012E	64	48	1800	60	n. a.	n. a.	n. a.	02111636KZ	02126846KZ	7	n. a.	S1BS010D