

 AIR RESOURCES BOARD	DEUTZ AG	EXECUTIVE ORDER U-R-013-0158 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-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)
2005	5DZXL06.5042	6.472	Diesel	8000
SPECIAL FEATURES & EMISSION CONTROL SYSTEMS			TYPICAL EQUIPMENT APPLICATION	
Direct Diesel Injection			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):

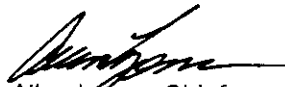
RATED POWER CLASS	EMISSION STANDARD CATEGORY		EXHAUST (g/kW-hr)					OPACITY (%)		
			HC	NOx	NMHC+NOx	CO	PM	ACCEL	LUG	PEAK
37 ≤ kW < 75	Tier 2	STD	N/A	N/A	7.5	5.0	0.40	20	15	50
		CERT	-	-	7.4	2.9	0.26	2	2	2

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 28TH day of October 2004.



Allen Lyons, Chief
 Mobile Source Operations Division

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 U-K-213-0158

Engine Model Summary Template

Engine Family	1.Engine Code	2.Engine Model	3.BHP@RPM (SAE Gross)	4 Fuel Rate: mm/stroke @ peak HP (for diesel only)	5 Fuel Rate: (bshp) @ peak HP (for diesel only)	6. Torque @ RPM (SEA Gross)	7. Fuel Rate: mm/stroke@peak torque	8. Fuel Rate: (bshp)@peak torque	9. Emission Control Device Per SAE J1530
5DZXL06.5042	CE41T	F3L914	57.5@2200	60	21.9	151.9@1550	66	17	EM
5DZXL06.5042	CE52T	F4L914	71.9@2200	57	27.8	198.4@1700	63	23.7	EM
5DZXL06.5042	CE57T	F4L914	78.6@2200	63	30.7	205@1700	69	26	EM
5DZXL06.5042	CE38T	F3L914	53.5@2200	55	20.1	152.6@1550	66	17	EM
5DZXL06.5042	CE59T	F4L914	82.6@2400	63	33.5	207.4@1700	68	25.6	EM
5DZXL06.5042	CE37T	F3L914	52.1@2200	52	19	152.6@1550	66	17	EM
5DZXL06.5042	CE40T	F3L914	56.4@2300	61	23.3	155.9@1600	66	17.5	EM
5DZXL06.5042	CE44T	F3L914	62.2@2400	60	23.9	156.5@1750	69	20.1	EM
5DZXL06.5042	CE44	F3L914	61.9@2500	61	25.4	148.9@1500	65	16.2	EM
5DZXL06.5042	CE42	F3L914	59.2@2500	59	24.5	145.2@1500	64	15.9	EM
5DZXL06.5042	CE41	F3L914	57.2@2300	61	23.3	149.7@1500	65	16.2	EM
5DZXL06.5042	CE39	F3L914	54.5@2300	58	22.2	141.6@1500	63	15.7	EM
5DZXL06.5042	CE37	F3L914	51.8@2300	56	21.4	137.9@1500	61	15.2	EM
5DZXL06.5042	CE39/1	F3L914	54.1@2150	61	21.8	143.8@1500	64	15.9	EM
5DZXL06.5042	CE37/1	F3L914	51.4@2150	58	20.7	141.6@1500	63	15.7	EM
5DZXL06.5042	CE37/2	F3L914	51@2000	60	19.9	143.8@1500	64	15.9	EM
5DZXL06.5042	DE36	F3L914	49.3@1800	62	18.5	FIXED	0	0	EM
5DZXL06.5042	DE37	F3L914	51@2000	60	19.9	FIXED	0	0	EM
5DZXL06.5042	DE38.5	F3L914	53.6@2200	55	20.1	FIXED	0	0	EM
5DZXL06.5042	DE40	F3L914	56.3@2400	55	21.9	FIXED	0	0	EM
5DZXL06.5042	CE59	F4L914	82.4@2500	61	33.8	199.1@1500	65	21.8	EM
5DZXL06.5042	CE56	F4L914	78.4@2500	59	32.7	195.4@1500	64	21.3	EM
5DZXL06.5042	CE56/1	F4L914	77.6@2300	61	31.1	199.1@1500	65	21.6	EM
5DZXL06.5042	CE53	F4L914	73.6@2300	59	30.1	191.7@1500	63	20.9	EM
5DZXL06.5042	CE50	F4L914	69.5@2300	56	28.6	188@1500	63	20.9	EM
5DZXL06.5042	CE53/1	F4L914	73.2@2150	61	29.1	195.4@1500	64	21.3	EM
5DZXL06.5042	CE50/1	F4L914	69.1@2150	58	27.7	191.7@1500	63	20.9	EM
5DZXL06.5042	CE48	F4L914	66.5@2150	55	26.2	184.3@1500	61	20.3	EM

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Engine Model Summary Template

Engine Family	1.Engine Code	2.Engine Model	3.BHP@RPM (SAE Gross)	4.Fuel Rate: mm/stroke @ peak HP (for diesel only)	5.Fuel Rate: (lb/hr) @ peak HP (for diesels only)	6.Torque @ RPM (SAE Gross)	7.Fuel Rate: mm/stroke@peak torque	8.Fuel Rate: (lb/hr)@peak torque	9.Emission Control Device Per SAE J1980
5DZXL06.5042	CE50/2	F4L914	68.7@2000	60	26.6	195.4@1500	64	21.3	EM DDI
5DZXL06.5042	CE48/1	F4L914	66.1@2000	58	25.7	188@1500	63	20.9	EM
5DZXL06.5042	CE45	F4L914	62@2000	55	24.4	180.7@1500	60	19.9	EM
5DZXL06.5042	DE49	F4L914	66.9@1800	65	25.9	FIXED	0	0	EM
5DZXL06.5042	DE49/1	F4L914	66.9@1846	64	26.2	FIXED	0	0	EM
5DZXL06.5042	DE50	F4L914	68.5@2000	60	26.6	FIXED	0	0	EM
5DZXL06.5042	DE52	F4L914	71.7@2200	55	26.8	FIXED	0	0	EM
5DZXL06.5042	DE53,5	F4L914	74.4@2400	55	29.3	FIXED	0	0	EM
5DZXL06.5042	CE71,7	F5L914	100.4@2500	58	40.2	245.6@1500	63	26.2	EM
5DZXL06.5042	CE70	F5L914	98.1@2500	57	39.5	239.7@1500	60	24.9	EM
5DZXL06.5042	CE70/1	F5L914	97.2@2300	58	37	245.6@1500	63	26.2	EM
5DZXL06.5042	CE66	F5L914	91.8@2300	56	35.7	236@1500	59	24.5	EM
5DZXL06.5042	CE63	F5L914	87.8@2300	55	35.1	233.8@1500	58	24.1	EM
5DZXL06.5042	CE66/1	F5L914	91.1@2150	58	34.6	239.7@1500	60	24.9	EM
5DZXL06.5042	CE63/1	F5L914	87.1@2150	56	33.4	236@1500	59	24.5	EM
5DZXL06.5042	CE60	F5L914	83.1@2150	55	32.8	230.8@1500	57	23.7	EM
5DZXL06.5042	CE63/2	F5L914	86.6@2000	58	32.2	239.7@1500	60	24.9	EM
5DZXL06.5042	CE60/1	F5L914	82.6@2000	55	30.5	233.8@1500	58	24.1	EM
5DZXL06.5042	CE56	F5L914	77.2@2000	52	28.8	227.1@1500	56	23.3	EM
5DZXL06.5042	DE58,5	F5L914	80@1800	60	29.9	FIXED	0	0	EM
5DZXL06.5042	DE59,5	F5L914	81.5@1846	60	30.7	FIXED	0	0	EM
5DZXL06.5042	DE62	F5L914	85.2@2000	59	32.7	FIXED	0	0	EM
5DZXL06.5042	DE65	F5L914	89.9@2200	55	33.6	FIXED	0	0	EM
5DZXL06.5042	DE67	F5L914	93.4@2400	55	36.6	FIXED	0	0	EM
5DZXL06.5042	CE72	F6L914	99.2@2150	55	39.4	276.5@1500	58	28.9	EM
5DZXL06.5042	CE72/1	F6L914	98.6@2000	55	36.6	280.2@1500	59	29.4	EM
5DZXL06.5042	CE68	F6L914	93.3@2000	53	35.3	272.8@1500	57	28.4	EM
5DZXL06.5042	DE70,5	F6L914	96.1@1800	60	35.9	FIXED	0	0	EM

Engine Model Summary Template

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Engine Family	1. Engine Code	2. Engine Model	3. BHP @ RPM (SAE Gross)	4. Fuel Rate: min/stroke @ peak HP (for diesel only)	5. Fuel Rate: (lb/hr) @ peak HP (for diesels only)	6. Torque @ RPM (SEA Gross)	7. Fuel Rate: mm/stroke @ peak torque	8. Fuel Rate: (lb/hr) @ peak torque	9. Emission Control Device Per SAE J1939
5DZXL06.5042	DE72	F6L914	98.2@1846	60	36.9	FIXED	0	0	EM DBI
5DZXL06.5042	CE59X	F4L914	82.9@2400	61	32.5	210.9@1700	72	27.1	EM J