

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)
2003	3DZXL02.7018	1.4, 2.0, 2.7	Diesel	3000, 5000
SPECIAL FEATURES & EMISSION CONTROL SYSTEMS			TYPICAL EQUIPMENT APPLICATION	
Direct Diesel Injection, Smoke Puff Limiter			Loader, Generator Set, Tractor, Compressor, Pump, 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):

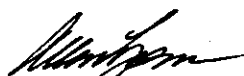
RATED POWER CLASS	EMISSION STANDARD CATEGORY		EXHAUST (g/kw-hr)					OPACITY (%)		
			HC	NOx	NMHC+NOx	CO	PM	ACCEL	LUG	PEAK
8 ≤ kW < 19	Tier 1	STD	N/A	N/A	9.5	6.6	0.80	20	15	50
19 ≤ kW < 37	Tier 1	STD	N/A	N/A	9.5	5.5	0.80	20	15	50
		CERT	-	-	9.4	2.7	0.34	1	2	4

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.

Executed at El Monte, California on this 9TH day of December 2002.



Allen Lyons, Chief
 Mobile Source Operations Division

Attachment 1 of 3

Manufacturer: DEUTZ AG
Engine Category: Nonroad CI
EPA Family Name: 3DZXLO2.7018
Mr. Family Name: F2L1011F
Process Code: New Submission

ENGINE MODEL SUMMARY FORM

U-R-013-0105

1. Engine code	2. Engine Model	3. BHP@	RPM	4. Fuel Rate @ Rated Power (mm ³ /stroke)	5. Fuel Rate (lbs./hr) Rated Power	6. Peak Torque @ RPM(NM)	7. Peak Torque (mm ³ /stroke)	8. Fuel Rate (lbs./hr) @ Peak Torque	9. Emission Control Device (SAE J1930)
C15.5	F2L1011F	21	2000	37.0	7.3	76.5	39.0	6.8	EM
C16	F2L1011F	21	2100	37.0	7.5	76.5	39.0	6.8	EM
C16.5	F2L1011F	22	2300	36.0	7.7	72	37.0	6.4	EM
C16.5/1	F2L1011F	22	2200	37.0	7.7	75	39.0	6.6	EM
C16/1	F2L1011F	21	2000	38.0	7.5	78	40.0	6.9	EM
C17.5	F2L1011F	23	2500	36.0	8.2	72	37.0	6.4	EM
C17.5/1	F2L1011F	23	2300	38.0	8.2	76.5	39.0	6.8	EM
C18.5	F2L1011F	25	2500	38.0	8.7	76.5	39.0	6.8	EM
C18.5/1	F2L1011F	25	2300	40.0	8.7	80.5	41.0	7.1	EM
C18/1	F2L1011F	24	2400	38.0	8.4	76.5	39.0	6.8	EM
C19	F2L1011F	25	2800	37.0	8.9	76.5	39.0	6.8	EM
C19.5	F2L1011F	26	2500	40.0	9.1	80.5	41.0	7.1	EM
C19/1	F2L1011F	25	2600	40.0	8.9	76.5	39.0	6.8	EM
C19/2	F2L1011F	25	2400	40.0	8.9	80.5	41.0	7.1	EM
C20	F2L1011F	27	2800	38.0	9.4	76.5	39.0	6.8	EM
C20.7	F2L1011F	28	2750	40.0	9.7	80.5	41.0	7.1	EM
C20/1	F2L1011F	27	2600	40.0	9.4	80.5	41.0	7.1	EM
C21.5/1	F2L1011F	29	2900	40.0	10.1	80.5	41.0	7.1	EM
C21/1	F2L1011F	28	3000	38.0	9.8	76.5	39.0	6.8	EM
C21/2	F2L1011F	28	2800	40.0	9.8	80.5	41.0	7.1	EM
C22/3	F2L1011F	29	3000	40.0	10.3	80.5	41.0	7.1	EM
D13.5	F2L1011F	18	1800	37.0	6.3	N/A	N/A	N/A	EM
D14.5	F2L1011F	19	1800	40.0	6.8	N/A	N/A	N/A	EM
D15.5	F2L1011F	20	1800	41.0	7.0	N/A	N/A	N/A	EM
C15.7	F2M1011	21	2000	38.0	7.4	76.5	39.0	6.8	EM
C16.2	F2M1011	22	2000	39.0	7.6	78	40.0	6.9	EM
C17.8	F2M1011	24	2300	38.0	8.3	76.5	39.0	6.8	EM
C18.8	F2M1011	25	2500	38.0	8.8	76.5	39.0	6.8	EM
C18.8/1	F2M1011	25	2300	40.0	8.8	80.5	41.0	7.1	EM
C19.8	F2M1011	27	2500	40.0	9.3	80.5	41.0	7.1	EM
C20.4	F2M1011	27	2600	40.0	9.6	80.5	41.0	7.1	EM
C20.5	F2M1011	27	2800	38.0	9.6	76.5	39.0	6.8	EM

DDI, SPL

2 of 3

Manufacturer: DEUTZAG
Engine Category: Nonroad CI
EPA Family Name: 3DZX102.7018
Mfr. Family Name: F2L1011F
Process Code: New Submission

ENGINE MODEL SUMMARY FORM

U-R-013-0105

1. Engine code	2. Engine Model	3. BHP@	RPM	4. Fuel Rate @ Rated Power (mm ³ /stroke)	5. Fuel Rate (lbs./hr) Rated Power	6. Peak Torque @ RPM(NM)	7. Peak Torque (mm ³ /stroke)	8. Fuel Rate (lbs./hr) @ Peak Torque	9. Emission Control Device (SAE J1930)
C21,5	F2M1011	29	2800	40.0	10.1	80.5	41.0	7.1	EM
C21,6	F2M1011	29	3000	38.0	10.1	76.5	39.0	6.8	EM
C22,6	F2M1011	30	3000	40.0	10.6	80.5	41.0	7.1	EM
D13,8	F2M1011	18	1800	38.0	6.5	N/A	N/A	N/A	EM
D14,1	F2M1011	19	1800	39.0	6.6	N/A	N/A	N/A	EM
D14,7	F2M1011	20	1800	40.0	6.9	N/A	N/A	N/A	EM
C23	F3L1011F	31	1800	40.0	10.8	121	40.0	10.7	EM
C26	F3L1011F	35	2300	36.5	12.2	116	38.0	10.3	EM
C26/1	F3L1011F	35	2500	35.0	12.2	110	36.0	9.7	EM
C27,5	F3L1011F	37	2500	36.5	12.9	116	38.0	10.3	EM
C27,5/1	F3L1011F	37	2300	39.0	12.9	121	40.0	10.7	EM
C27,5/2	F3L1011F	37	2800	37.0	12.9	116	38.0	10.3	EM
C28,3	F3L1011F	38	2400	39.0	13.3	121	40.0	10.7	EM
C29	F3L1011F	39	2500	38.5	13.6	121	40.0	10.7	EM
C30	F3L1011F	40	2800	37.0	14.1	116	38.0	10.3	EM
C30,5	F3L1011F	41	2900	37.5	14.3	116	38.0	10.3	EM
C30/1	F3L1011F	40	2600	39.0	14.1	121	40.0	10.7	EM
C31	F3L1011F	42	3000	37.5	14.5	116	38.0	10.3	EM
C31,5	F3L1011F	42	2800	39.0	14.8	121	40.0	10.7	EM
C32,2	F3L1011F	43	2900	39.0	15.1	121	40.0	10.7	EM
C33	F3L1011F	44	3000	39.5	15.5	121	40.0	10.7	EM
C33,8/2	F3L1011F	45	3000	40.0	15.9	121	40.0	10.7	EM
D20,5	F3L1011F	27	1800	36.0	9.6	N/A	N/A	N/A	EM
D21	F3L1011F	28	1800	37.0	9.8	N/A	N/A	N/A	EM
D21,3	F3L1011F	29	1700	38.0	10.0	N/A	N/A	N/A	EM
D22	F3L1011F	29	1800	38.0	10.3	N/A	N/A	N/A	EM
D23	F3L1011F	31	1800	40.0	10.8	N/A	N/A	N/A	EM
D24	F3L1011F	32	2000	37.0	11.3	N/A	N/A	N/A	EM
C35	F4L1011F	47	2300	36.0	16.4	153	36.0	13.5	EM
D25	F4L1011F	34	1800	36.0	11.7	N/A	N/A	N/A	EM
D27,5	F4L1011F	37	1800	36.0	12.9	N/A	N/A	N/A	EM
D29	F4L1011F	39	1800	38.0	13.6	N/A	N/A	N/A	EM

DDF, SGL

3 of 3

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D29/1	F4L1011F	39	1850	37.0	13.6	N/A	N/A	N/A	EM DPF, SPL
D30,5	F4L1011F	41	1800	40.0	14.3	N/A	N/A	N/A	EM
D31	F4L1011F	42	1900	40.0	14.5	N/A	N/A	N/A	EM