

State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER U-R-13-7

Relating to Certification of New Heavy-Duty Off-Road Equipment Engines

DEUTZ CORPORATION GmbH

Pursuant to the authority vested in the Air Resources Board by Sections 43000.5, 43013 and 43018 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 Deutz Corporation GmbH 1997 model-year engine, with rated power between 175 and 750 horsepower, and exhaust emission control systems are certified as described below for use in heavy-duty off-road equipment:

Typical Equipment Usage: Genset, Pump

Fuel Type: Diesel

<u>Engine Family</u>	<u>Liters (Cubic Inches)</u>	<u>Exhaust Emission Control Systems and Special Features</u>
VDZ6.1R6DARC	6.13 (374)	Turbocharger Smoke Puff Limiter Charge Air Cooler

Engine models and codes are listed on attachments. Production engines shall be in all material respects the same as those for which certification is granted.

The total hydrocarbons (THC), carbon monoxide (CO), nitrogen oxides (NOx), and particulate matter (PM) certification exhaust emission standards, in grams per brake horsepower-hour (g/bhp-hr), and the opacity of smoke emission standards, in percent (%), during acceleration (Accel), lugging (Lug), and peak (Peak) modes, for this engine family are (Title 13, California Code of Regulations, Section 2423):

<u>Exhaust Emissions (g/bhp-hr)</u>				<u>Smoke Opacity (%)</u>		
<u>THC</u>	<u>CO</u>	<u>NOx</u>	<u>PM</u>	<u>Accel</u>	<u>Lug</u>	<u>Peak</u>
1.0	8.5	6.9	0.4	20	15	50

The THC, CO, NOx and PM exhaust emission certification values, in g/bhp-hr, and the opacity of smoke emission certification values, in percent (%), for this engine family are:

<u>Exhaust Emissions (g/bhp-hr)</u>				<u>Smoke Opacity (%)</u>		
<u>THC</u>	<u>CO</u>	<u>NOx</u>	<u>PM</u>	<u>Accel</u>	<u>Lug</u>	<u>Peak</u>
0.4	1.0	6.6	0.3	10	10	16

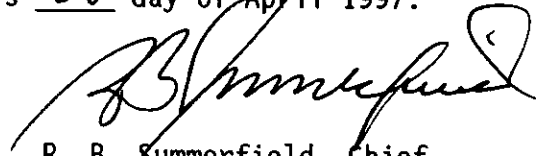
BE IT FURTHER RESOLVED: That the listed engine models comply with the "Exhaust Emission Standards and Test Procedures--Heavy-Duty Off-Road Diesel Cycle Engines" (Title 13, California Code of Regulations, Section 2423) for the aforementioned model year.

BE IT FURTHER RESOLVED: That the listed engine models also comply with the "Emission Control Labels--1996 and Later Heavy-Duty Off-Road Diesel Cycle Engines" (Title 13, California Code of Regulations, Section 2424) for the aforementioned model year.

BE IT FURTHER RESOLVED: That for the listed engine models, the manufacturer has submitted the materials to demonstrate certification compliance with the Board's emission control system warranty provisions (Title 13, California Code of Regulations, Section 2425 et seq.).

Engines certified under this Executive Order must conform to all applicable California emission regulations.

Executed at El Monte, California this 28th day of April 1997.

A handwritten signature in black ink, appearing to read "R. B. Summerfield", with a large, stylized flourish at the end.

R. B. Summerfield, Chief
Mobile Source Operations Division

List of emission related components

Engine type	Displacement	Engine code	Nominal Power ± 5%	Nominal speed ± 50 rpm	Mean effective pressure	Injection rate at nom. speed, ±4mm³	Peak torque ± 5%	Injection rate at peak torque ±4mm³	Speed at peak torque ± 100 rpm	Low idle (+ 800rpm, dep. on engine applic.)	High idle (+300 rpm, dep. on engine applic.)	Fuel injection pump	Fuel injection nozzle	Camshaft	Injection timing	Smoke limiter, part of speed governor, -5mm³	Speed governor	Exhaust manifold	Exhaust manifold, optionally	
	cm³		KW	rpm	bar	mm³/stroke	Nm	mm³/stroke	rpm	rpm	rpm	description	description	draw. numb.	°bdc	mm³/str. @ 1000 rpm	description	draw. numb.	draw. numb.	
1																				
2	BF6L913C	6128 C141	141	2500	11.04	92	670	101	1500	650	2600	PES6A95D410/3RS2909	DLLA147P680	02100079UA	20	64	RSV325-1250A5C876L	02134133UC	02236036UB	
3	BF6L913C	6128 C136	136	2500	10.65	89	646	97	1500	650	2600	PES6A95D410/3RS2909	DLLA147P680	02100079UA	20	64	RSV325-1250A5C876L	02134133UC	02236036UB	
4	BF6L913C	6128 C131	131	2500	10.26	86	622	94	1500	650	2600	PES6A95D410/3RS2909	DLLA147P680	02100079UA	20	64	RSV325-1250A5C876L	02134133UC	02236036UB	
5	BF6L913C	6128 C134	134	2300	11.41	91	649	98	1500	650	2400	PES6A95D410/3RS2909	DLLA147P680	02100079UA	20	64	RSV325-1250A5C876L	02134133UC	02236036UB	
6	BF6L913C	6128 C132	132	2300	11.24	89	639	96	1500	650	2400	PES6A95D410/3RS2909	DLLA147P680	02100079UA	20	64	RSV325-1250A5C876L	02134133UC	02236036UB	
7	BF6L913C	6128 C128	128	2300	10.90	86	618	93	1500	650	2400	PES6A95D410/3RS2909	DLLA147P680	02100079UA	20	64	RSV325-1250A5C876L	02134133UC	02236036UB	
8	BF6L913C	6128 C122	122	2150	11.11	86	602	91	1500	650	2240	PES6A95D410/3RS2909	DLLA147P680	02100079UA	20	64	RSV325-1250A5C876L	02134133UC	02236036UB	
9	BF6L913C	6128 C121	121	2150	11.02	85	598	90	1500	650	2240	PES6A95D410/3RS2909	DLLA147P680	02100079UA	20	64	RSV325-1250A5C876L	02134133UC	02236036UB	
10	BF6L913C	6128 C118	118	2150	10.75	82	565	86	1500	650	2240	PES6A95D410/3RS2909	DLLA147P680	02100079UA	20	64	RSV325-1250A5C876L	02134133UC	02236036UB	
11	BF6L913C	6128 C117	117	2000	11.45	86	602	91	1500	650	2080	PES6A95D410/3RS2909	DLLA147P680	02100079UA	20	64	RSV325-1250A5C876L	02134133UC	02236036UB	
12	BF6L913C	6128 C114	114	2000	11.16	84	587	88	1500	650	2080	PES6A95D410/3RS2909	DLLA147P680	02100079UA	20	64	RSV325-1250A5C876L	02134133UC	02236036UB	
13	BF6L913C	6128 D151	151	1800	16.43	126	n. a.	n. a.	n. a.	n. a.	n. a.	PES6A95D410/3RS2909	DLLA147P680	02100079UA	18	n. a.	RSV325-1250A5C872L	02134133UC	02236036UB	
14	BF6L913C	6128 D137	137	1800	14.90	110	n. a.	n. a.	n. a.	n. a.	n. a.	PES6A95D410/3RS2909	DLLA147P680	02100079UA	18	n. a.	RSV325-1250A5C872L	02134133UC	02236036UB	
15	BF6L913C	6128 D108	108	1800	11.75	87	n. a.	n. a.	n. a.	n. a.	n. a.	PES6A95D410/3RS2909	DLLA147P680	02100079UA	18	n. a.	RSV325-1250A5C872L	02134133UC	02236036UB	
16	BF6L913C	6128 D105	105	1800	11.42	84	n. a.	n. a.	n. a.	n. a.	n. a.	PES6A95D410/3RS2909	DLLA147P680	02100079UA	18	n. a.	RSV325-1250A5C872L	02134133UC	02236036UB	
17	BF6L913C	6128 D99	99	1800	10.77	80	n. a.	n. a.	n. a.	n. a.	n. a.	PES6A95D410/3RS2909	DLLA147P680	02100079UA	18	n. a.	RSV325-1250A5C872L	02134133UC	02236036UB	

VDZ 6.1 P6DARC