

State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER U-R-1-75

Relating to Certification of New Heavy-Duty Off-Road Equipment Engines
CATERPILLAR, INC.

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 Caterpillar, Inc. 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: Parking Lot Passenger Tram

Fuel Type: Diesel

<u>Engine Family</u>	<u>Liters</u>	<u>(Cubic Inches)</u>	<u>Exhaust Emission Control Systems and Special Features</u>
VCP442DZDARK	7.1	(442)	Turbocharger Charge Air Cooler Engine Control Module

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 matters (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-hp)</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

BE IT FURTHER RESOLVED: That at the request by the manufacturer, the listed engine models which were previously certified under Executive Order A-13-109 to comply with the emission standards and test procedures for on-road heavy-duty diesel motor vehicle engines (Title 13, California Code of Regulations, Sections 1956.8 (a)(1) and (b)) are also considered to be in compliance with the applicable emission standards and test procedures for off-road heavy-duty diesel engines pursuant to Title 13, California Code of Regulations, Section 2423(f).

BE IT FURTHER RESOLVED: That the approval under this Executive Order shall only apply to sixteen (16) engines with engine serial numbers listed in the attachment.

BE IT FURTHER RESOLVED: That all conditions and stipulations under Executive Order A-13-109 shall apply to the engines listed in the attachment.

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

Executed at El Monte, California this 10th day of December 1997.

A handwritten signature in black ink, appearing to read "R. B. Summerfield". The signature is fluid and cursive, with a large initial "R" and "B".

R. B. Summerfield, Chief
Mobile Source Operations Division

ATTACHMENT A

<u>Vehicle Type</u>	<u>Equipment Chassis Number</u>	<u>Engine Serial Number</u>
Passenger Tram	001	1WM10768
Passenger Tram	002	1WM10773
Passenger Tram	003	1WM10771
Passenger Tram	004	1WM10820
Passenger Tram	005	1WM10818
Passenger Tram	006	1WM10823
Passenger Tram	007	1WM10774
Passenger Tram	008	1WM10772
Passenger Tram	009	1WM10822
Passenger Tram	010	1WM10826
Passenger Tram	011	1WM10825
Passenger Tram	012	1WM10824
Passenger Tram	013	1WM10775
Passenger Tram	014	1WM10819
Passenger Tram	015	1WM10770
Passenger Tram	016	1WM10769

1997 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET
OFF-ROAD HEAVY-DUTY DIESEL-STANDARD ENGINES

Manufacturer Caterpillar Inc. **Engine Family** VCP442DZDARK
Displacement 7.1 / **Liters** 442 / **Cubic Inches**
Maximum Rated Power: 300 **HP @** 2200 **RPM** **Engine Configuration:** 16
Ignition: Compression X **Compression with Glow Plug** Spark
Fuel Type (s): Dedicated X **Flex-Fuel** _____ **Dual-Fuel** _____ **Diesel** X **M100** _____ **M85** _____
CNG _____ **LNG** _____ **LPG** _____ **Other (specify)** _____
Diesel Cert Fuel: 13CCR 2282 **40 CFR 86.1313-90** _____ **40 CFR 86.1313-94** X
Primary Intended Service Class: LHD _____ **MHD** X _____ **HHD** _____ **Urban Bus** _____
Exhaust ECS (incl. MFI, TC, CAC) CAC, ECM, TC

(Use abbreviations per SAE J1930 SEP91)

Engine Model (Eng. Code)	Rated HP @ RPM	Fuel Rate @ Rated HP mm ³ /stroke (lbs/hr)	Fuel Pump & Injector Part No.	ECM/PCM Part No.	EGR Valve Part No.	PTOX / Catalytic Converter Part No.
3126-1	300 @ 2200	143 (105.6)	116-7150	120-8916	---	---
3126-1	300 @ 2200	143 (105.6)	116-7150	126-6938		
3126-1	300 @ 2200	143 (105.6)	116-7150	119-0906		
3126-1	300 @ 2200	143 (105.6)	116-7150	126-6941		
3126-2	275 @ 2200	129 (95.2)	116-7150	126-6935		
3126-2	275 @ 2200	129 (95.2)	116-7150	118-0004		
3126-2	275 @ 2200	129 (95.2)	116-7150	126-6931		
3126-2	275 @ 2200	129 (95.2)	116-7150	120-8923		
3126-3	250 @ 2200	119 (87.7)	116-6706	133-5551		
3126-3	250 @ 2200	116 (85.7)	116-7150	112-7637		
3126-3	250 @ 2200	116 (85.7)	116-7150	120-5895		
3126-4	230 @ 2200	106 (78.4)	116-7150	118-0007		
3126-5	210 @ 2200	100 (74.2)	119-3346	119-0909		
3126-5	210 @ 2200	94 (76.0)	119-3346	120-5892		
3126-6	190 @ 2200	100 (74.3)	119-3346	120-8942		
3126-7	175 @ 2400	86 (69.6)	119-3346	117-7637		

ISSUE DATE	09 SEPT 96						
REVISION NO.							
REVISION DATE							

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