

State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER U-R-21-1

Relating to Certification of New Heavy-Duty Off-Road Diesel Cycle Engines

POWER SYSTEMS ASSOCIATES

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 Power Systems Associates 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 [dedicated] or Diesel + Compressed Natural Gas (CNG) [bi-fuel] or Diesel + Liquefied Natural Gas (LNG) [bi-fueled]

<u>Engine Family</u>	<u>Liters (Cubic Inches)</u>		<u>Exhaust Emission Control Systems and Special Features</u>
VPS442DZJARK	7.1	(442)	Turbocharger Charge Air Cooler Engine Control Module (Diesel) Engine Control Module (CNG/LNG)

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

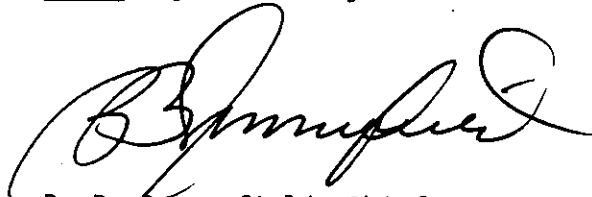
BE IT FURTHER RESOLVED: That the listed engine models which have been previously certified under Executive Order A-326-4 to comply with the California emission standards and test procedures for on-road heavy-duty diesel motor vehicle engines (Title 13, California Code of Regulations, Sections 1956.8 (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 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 seventeen (17) engines with engine serial numbers listed in the attachment.

BE IT FURTHER RESOLVED: That all conditions and stipulations under Executive Order A-326-4 shall apply to the engines listed in attachment.

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

Executed at El Monte, California this 5th day of January 1998.

A handwritten signature in black ink, appearing to read "R. B. Summerfield", written in a cursive style.

R. B. Summerfield, Chief
Mobile Source Operations Division

ENGINE FAMILY: VPS442DZJARK

EO: U-R-21-1

C. California Codes

Engine Code	Engine Model	BHP@RPM	Fuel Rate mm/stroke	Rated Fuel Rate lb/hr	Torque @ RPM	Fuel Rate mm/stroke	Fuel Rate lb/hr	Emiss. Device
1	3126G	250 @ 2200	19.0d/140.0NG	10.2d/100.0NG	660 @ 1440	19.0d/110.6NG	8.8d/61.2NG	EC, DI, TC, CAC
2	3126G	190 @ 2200	16.0d/107.0NG	10.2d/76.0NG	520 @ 1440	16.0d/84.9NG	7.4d/46.9NG	EC, DI, TC, CAC

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POWER SYSTEMS ASSOCS

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