

State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER U-R-14-39
Relating to Certification of New Heavy-Duty Off-Road Equipment Engines

AB VOLVO PENTA

Pursuant to the authority vested in the Air Resources Board at Sections 43000.5, 43013, and 43018 of the Health and Safety Code; and

Pursuant to the authority vested in the undersigned at Sections 39515 and 39516 of the Health and Safety Code and Executive Order G-45-9;

IT IS ORDERED AND RESOLVED: That the following diesel engines and exhaust emission control systems produced by the manufacturer are certified as described below for use in heavy-duty off-road equipment:

Model Year: 2000

Typical Equipment Usage: Other OEM Equipment

Engine Power Ratings Range: 175 – 750 horsepower, inclusive

Fuel Type: Diesel

<u>Engine Family</u>	<u>Displacement</u>		<u>Exhaust Emission Control Systems and Special Features</u>
	<u>Liters</u>	<u>Cubic Inches</u>	
YVPXL12.0ABA (TWD1230/1VE)	12.0	732	Turbocharger Charge Air Cooler Smoke Puff Limiter

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

	<u>Exhaust Emissions (g/hp-h)</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>
Standard	1.0	8.5	6.9	0.4	20	15	50
Certification	0.1	0.4	4.6	0.1	15	8	27

BE IT FURTHER RESOLVED: That the listed engine models comply with "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 "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, Sections 2425 *et seq.*).

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

Executed at El Monte, California this 7th day of March 2000.



R. B. Summerfield, Chief
Mobile Source Operations Division

Manufacturer: **AB Volvo Penta**
 Engine category: **Nonroad CI**
 EPA Engine Family: **YVPXL12.0ABA**
 Mfr Family Name: **TWD1230/1VE**
 Process Code: **New Submission**

1.Engine Code	2.Engine Model	3.BHP@RPM (SAE Gross)	4.Fuel Rate: mm/stroke @ peak HP (for diesel only)	5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only)	6.Torque @ RPM (SEA Gross)	7.Fuel Rate: mm/stroke@peak torque	8.Fuel Rate: (lbs/hr)@peak torque	9.Emission Control Device Per SAE J1930
YVPXL12.0ABA	TWD1230VE	343@2200	184@343	135.4	1194@1200	228@1194	91.5	EM, <i>9PL, TC, CAC</i>
YVPXL12.0ABA	TWD1230VE	369@2100	202@369	141.9	1303@1200	250@1303	100.4	EM <i>9PL, TC, CAC</i>
YVPXL12.0ABA	TWD1231VE	415@2100	226@415	155	1376@1200	263@1376	111	EM <i>9PL, TC, CAC</i>
YVPXL12.0ABA	TWD1231VE	394@2100	214@394	144	1291@1200	251@1291	105	EM <i>9PL, TC, CAC</i>
YVPXL12.0ABA	TWD1231VE	369@2100	196@369	137	1269@1200	249@1269	103	EM <i>9PL, TC, CAC</i>
YVPXL12.0ABA	TWD1231VE	343@2200	180@343	129	1173@1200	226@1173	94	EM <i>9PL, TC, CAC</i>

EPA Cert No. *VPX-NR01-00-10.*