

State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER A-243-22

Relating to Certification of New Heavy-Duty Engines and Vehicles

VOLVO TRUCK CORPORATION

Pursuant to the authority vested in the Air Resources Board by Sections 43100, 43102 and 43103 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 1997 model-year Volvo Truck Corporation diesel-cycle engines are certified for use in motor vehicles with a manufacturer's gross vehicle weight rating (GVWR) over 14,000 pounds:

Fuel Type: Diesel

<u>Engine Family</u>	<u>Engine Displacement Liters (Cubic Inches)</u>		<u>Exhaust Emission Control Systems and Special Features</u>
VVT12.EJDBRA (VED12)	12.1	(740)	Turbocharger Charge Air Cooler Engine Control Module

Engine models and codes are listed on attachments.

The following are the certification exhaust emission standards for this engine family in grams per brake horsepower-hour:

<u>Total Hydrocarbons</u>	<u>Carbon Monoxide</u>	<u>Nitrogen Oxides</u>	<u>Particulates</u>
1.3	15.5	5.0	0.10

The following are the certification exhaust emission values for this engine family in grams per brake horsepower-hour:

<u>Total Hydrocarbons</u>	<u>Carbon Monoxide</u>	<u>Nitrogen Oxides</u>	<u>Particulates</u>
0.1	2.8	5.0	0.08

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 2035 et seq.).

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

The Bureau of Automotive Repair will be notified by copy of this order and attachments.

Executed at El Monte, California this 29th day of April 1998.



R. B. Summerfield, Chief
Mobile Source Operations Division

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Section, Family and Page

Date: _____ ARB Rep _____

VII. CAL-12.1A -1

Issue Date:
1996-06-17

Revision Number and Date:

1997 MY AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET E.O# _____

HEAVY-DUTY DIESEL - STANDARD ENGINES

A-243-22

Manufacturer: Volvo Truck Corporation Engine Family: VVT12.EJDBRA (VE D12)
 Displacement: 12.1 Liters 740 Cubic Inches
 All Eng Codes in Eng Family: CA 49S 50S X Strokes/Cycle: 4 Valves/Cylinder: 4
 Ignition: Compression X Compression with Glow Plug _____ Spark _____
 Fuel Type(s): Dedicated X Flex-Fuel _____ Dual-Fuel _____ Bi-Fuel _____ Diesel X CNG _____
 LNG _____ LPG _____ M85 _____ M100 _____ Other (specify) _____
 Diesel Cert Fuel: 13 CCR 2282 _____ 40 CFR 86.1313-90 _____ 40 CFR 86.1313-94 X
 Maximum Rated Power: 425 HP & 1700 RPM Engine Configuration : I-6
 Exhaust ECS (e.g. OC, EGR, PTOX, IFI, TC, CAC) : ECM, TC, CAC
 (use abbreviations per SAE J1930 MAY91)

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.
VE D12-370 (I)	370 / 1700	212.0 (118.9)	Unit Injectors 1 547 909	EPG-1677605 VEB-1677835	----	----
VE D12-415 (II)	415 / 1700	239.0 (134.0)	1 547 909	EPG-1677604 VEB-1677834	----	----
VE D12-425 (III)	425 / 1700	245.0 (137.3)	1 547 909	EPG-8148438 VEB-8148439	----	----
VE D12-370VT (IV)	370 / 1700	212.0 (118.9)	1 547 909	EPG-8148386 VEB-8148389	----	----
VE D12-415VT (V)	415 / 1700	239.0 (134.0)	1 547 909	EPG-8148385 VEB-8148388	----	----
VE D12-310 (VI)	310 / 1700	179.0 (100.3)	1 547 287	EPG-1677492 VEB-1677837	----	----
VE D12-335 (VII)	335 / 1700	194.0 (108.7)	1 547 287	EPG-1677457 VEB-1677836	----	----
VE D12-335VT (VIII)	335 / 1700	194.0 (108.7)	1 547 287	EPG-1677387 VEB-1677390	----	----
VE D12-425VT (IX)	425 / 1700	245.0 (137.3)	1 547 909	EPG-8148475 VEB-8148476	----	----
VE D12-425HT (X)	425 / 1700	245.0 (137.3)	1 547 909	EPG-8148475 VEB-8148476	----	----

EPG = Exhaust Pressure Governor VEB= VOLVO Engine Brake

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Date: _____ ARB Rep _____

Section, Family and Page
VII. CAL-12.1A -1.1

Issue Date: 1996-06-27

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1997 MY AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET E.O# _____
HEAVY-DUTY DIESEL - STANDARD ENGINES A-243-22

Manufacturer: Volvo Truck Corporation Engine Family: VVT12.EJDBRA (VE D12)
 Displacement: 12.1 Liters 740 Cubic Inches
 All Eng Codes in Eng Family: CA 49S 50S Strokes/Cycle: 4 Valves/Cylinder: 4
 Ignition: Compression Compression with Glow Plug _____ Spark _____
 Fuel Type(s): Dedicated Flex-Fuel _____ Dual-Fuel _____ Bi-Fuel _____ Diesel CNG _____
 LNG _____ LPG _____ M85 _____ M100 _____ Other (specify) _____
 Diesel Cert Fuel: 13 CCR 2282 40 CFR 86.1313-90 40 CFR 86.1313-94
 Maximum Rated Power: 425 HP & 1700 RPM Engine Configuration : I-6
 Exhaust ECS (e.g. OC, EGR, PTOX, IFI, TC, CAC) : ECM, TC, CAC
 (use abbreviations per SAE J1930 MAY91)

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.
VE D12-425A (XI)	425 / 1700	245.0 (137.3)	Unit Injectors 3964 404	EPG - 3964 471 VEB - 3964 472	----	----
VE D12-425B (XII)	425 / 1700	245.0 (137.3)	3964 404	EPG - 3964 473 VEB - 3964 474	----	----
VE D12-385 (XIII)	385 / 1700	221.0 (123.6)	3964 404	EPG - 3964 469 VEB - 3964 470	----	----
VE D12-345 (XIV)	345 / 1700	196.0 (109.6)	3964 404	EPG - 3964 467 VEB - 3964 468	----	----

EPG = Exhaust Pressure Governor VEB= VOLVO Engine Brake