

State of California  
AIR RESOURCES BOARD

EXECUTIVE ORDER A-243-21

Relating to Certification of New Heavy-Duty Motor Vehicle Engines

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 Volvo Truck Corporation 1996 model diesel 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>Liters (Cubic Inches)</u>		<u>Exhaust Emission Control Systems and Special Features</u>
TVT12.EJDBRA (VE-D12)	12.1	(740)	Engine Control Module Turbocharger Charge Air Cooler

Engine models and codes are listed on attachments.

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

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

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

<u>Engine Family</u>	<u>Total Hydrocarbons</u>	<u>Carbon Monoxide</u>	<u>Nitrogen Oxides</u>	<u>Particulates</u>
TVT12.EJDBRA (VE-D12)	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.).

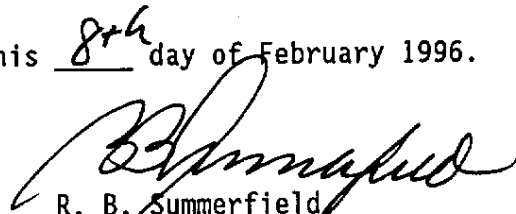
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Engines certified under this Executive Order must conform to all applicable California emission regulations.

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

Executed at El Monte, California this 8<sup>th</sup> day of February 1996.



R. B. Summerfield  
Assistant Division Chief  
Mobile Source Division

**HEAVY-DUTY DIESEL - STANDARD ENGINES**

**A-243-21**

Manufacturer: Volvo Truck Corporation Engine Family: TVT12.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 <sup>3</sup> / 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	----	----

EPG = Exhaust Pressure Governor      VEB= VOLVO Engine Brake