

State of California  
AIR RESOURCES BOARD

EXECUTIVE ORDER A-243-23

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<br/>Liters (Cubic Inches)</u> |       | <u>Exhaust Emission Control<br/>Systems and Special Features</u> |
|------------------------|--|-------|--|
| VVT6.7D6DBRA<br>(VED7) | 6.7  | (409) | Turbocharger<br>Charge Air Cooler<br>Smoke Puff Limiter          |

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> |
|---------------------------|------------------------|------------------------|---------------------|
| 0.3                       | 1.0                    | 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 29<sup>th</sup> day of April 1998.



R. B. Summerfield, Chief  
Mobile Source Operations Division

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 Date: \_\_\_\_\_ ARB Rep: \_\_\_\_\_  
 Section, Family and Page  
**VII. CAL-6.7A -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-243-23

Manufacturer: Volvo Truck Corporation Engine Family: VVT6.7D6DBRA (VE D7)  
 Displacement: 6.7 Liters 409 Cubic Inches  
 All Eng Codes in Eng Family: CA 49S 50S  Strokes/Cycle: 4 Valves/Cylinder: 2  
 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: 280 HP & 2200 RPM Engine Configuration: I-6  
 Exhaust ECS (e.g. OC, EGR, PTOX, IFITC, CAC): EM, SPL, TC, CAC, DFI  
 (use abbreviations per SAE J1930 MAY91)

| Engine Model<br>(Eng. Code) | Rated HP<br>@ RPM | Fuel Rate<br>@ Rated HP<br>mm <sup>3</sup> / stroke<br>( lbs / hr ) | Fuel Pump<br>& Injector<br>Part No. | ECM/PCM<br>Part No. | EGR<br>Valve<br>Part No. | PTOX /<br>Catalytic<br>Converter<br>Part No. |
|-----------------------------|-------------------|---|-------------------------------------|---------------------|--------------------------|--|
| VE D7A230<br>( I )          | 230 / 2200        | 123.0<br>(90.0)   | 477813 and<br>477885                | ----                | ----                     | ----   |
| VE D7A260<br>( II )         | 260 / 2200        | 129.0<br>(94.3)   | 477814 and<br>477816                | ----                | ----                     | ----   |
| VE D7A280<br>( III )        | 280 / 2200        | 142.0<br>(103.9)  | 477815 and<br>477816                | ----                | ----                     | ----   |
| VE D7A275<br>( IV )         | 275 / 2200        | 139.0<br>(101.4)  | 8192537 and<br>477816               | ----                | ----                     | ----   |
|                             |                   |   |                                     |                     |                          |  |