State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER A-243-20

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

| Engine Family | Liters | (Cubic Inches) | Exhaust Emission Control Systems and Special Features |
|---|---|---|---|
| TVT6.7D6DBRA (VE-D7) | 6.7 | (409) | Smoke Puff Limiter<br>Turbocharger<br>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:

| Total Hydrocarbons | Carbon Monoxide | Nitrogen Oxides | Particulates |
|---|---|---|---|
| 1.3 | 15.5 | 5.0 | 0.10 |

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

| Engine Family | Total Hydrocarbons | Carbon Monoxide | Nitrogen Oxides | Particulates |
|---|---|---|---|---|
| TVT6.7D6DBRA (VE-D7) | 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 8th day of February 1996.

R. B. Summerfield
Assistant Division Chief
Mobile Source Division

**1996 MY AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET** E.O#_____

**HEAVY-DUTY DIESEL - STANDARD ENGINES** A-243-20

Manufacturer: Volvo Truck Corporation Engine Family: TVT6.7D6DBRA (VE D7)

Displacement: 6.7 Liters 409 Cubic Inches

All Eng Codes in Eng Family: ___CA ___49S ___50S X Strokes/Cycle: 4 Valves/Cylinder: 2

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: 280 HP & 2200 RPM Engine Configuration : I-6

Exhaust ECS (e.g. OC, EGR, PTOX, IFI,TC, CAC ): EM, SPL, TC, CAC, DFI

(use abbreviations per SAE J1930 MAY91 )

| Engine Model ( Eng. Code ) | Rated HP @ RPM | Fuel Rate @ Rated HP mm3 / stroke ( lbs / hr ) | Fuel Pump & Injector Part No. | ECM/PCM Part No. | EGR Valve Part No. | PTOX / Catalytic Converter Part No. |
|---|---|---|---|---|---|---|
| VE D7A230 ( I ) | 230 / 2200 | 123.0 (90.0) | 477813 and 477885 | ----- | ----- | ----- |
| VE D7A260 ( II ) | 260 / 2200 | 129.0 (94.3) | 477814 and 477816 | ----- | ----- | ----- |
| VE D7A280 ( III ) | 280 / 2200 | 142.0 (103.9) | 477815 and 477816 | ----- | ----- | ----- |
| VE D7A275 (IV) | 275 / 2200 | 139.0 (101,4) | 8192537 and 477816 | ----- | ----- | ----- |
| | | | | | | |