

State of California  
AIR RESOURCES BOARD

EXECUTIVE ORDER A-21-140

Relating to Certification of New Medium-Duty Vehicle Engines

CUMMINS ENGINE COMPANY, INC.

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 1996 model-year Cummins Engine Company, Inc. diesel-cycle engines are certified for use in motor vehicles with a manufacturer's gross vehicle weight rating (GVWR) of 8,501 to 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>
TCE359D6D1AA (403I)	5.9 (359)	Exhaust Gas Recirculation Oxidation Catalytic Converter 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>Non-Methane Hydrocarbons + Nitrogen Oxides</u>	<u>Carbon Monoxide</u>	<u>Particulates</u>
3.9	14.4	0.10

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

<u>Engine Family</u>	<u>Non-Methane Hydrocarbons + Nitrogen Oxides</u>	<u>Carbon Monoxide</u>	<u>Particulates</u>
TCE359D6D1AA (403I)	3.8	0.8	0.09

BE IT FURTHER RESOLVED: That the listed engine models are certified to the optional standards and test procedures applicable to incomplete and diesel medium-duty vehicles of 8,501 to 14,000 pounds GVWR pursuant to Title 13, California Code of Regulations, Section 1956.8(g).

BE IT FURTHER RESOLVED: That the listed engine models shall be subject to the in-use compliance provisions applicable to 1995 and subsequent model-year medium-duty vehicles set forth in Title 13, California Code of Regulations, Section 2139(c).

BE IT FURTHER RESOLVED: That the listed engine models also comply with the "California Motor Vehicle Emission Control Label Specifications" for the aforementioned model year (Title 13, California Code of Regulations, Section 1965).

BE IT FURTHER RESOLVED: That the listed engine models are not subject to the "Malfunction and Diagnostic System for 1988 and Subsequent Model Year Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles with Three-Way Catalyst Systems and Feedback Control" (Title 13, California Code of Regulations, Section 1968) for the aforementioned model year.

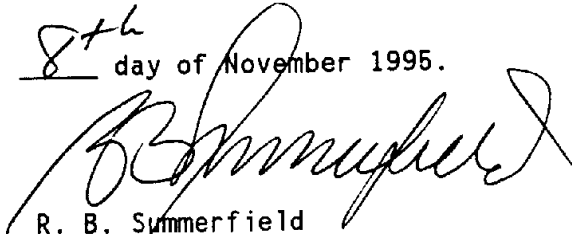
BE IT FURTHER RESOLVED: That the listed engine models have been exempted from the "Malfunction and Diagnostic System Requirements--1994 and Subsequent Model-Year Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles and Engines" pursuant to Title 13, California Code of Regulations, Section 1968.1(m)(2.0) for the aforementioned model year.

BE IT FURTHER RESOLVED: That 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 8<sup>th</sup> day of November 1995.

  
R. B. Summerfield  
Assistant Division Chief  
Mobile Source Division

1996 MODEL YEAR AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET  
 DIESEL MEDIUM-DUTY VEHICLE ENGINES Page 1 of 3  
 (CERTIFIED USING HEAVY-DUTY ENGINE TEST PROCEDURES)

Manufacturer: Cummins Engine Company, Inc. Engine Family: (4031) TCE 359D6D1AA  
 Engine Config: 1-6 Valves/Cyl: 2 Displ: 5.9 Liters 359 CID  
 Cert Std: Tier-1  LEV  ULEV  Engine Intended Service Class: M4  M5   
 In-Use Stds: Full In Use  Alt In Use  Max Rated Power: 180 HP @ 2500 RPM  
 All Eng Codes in Eng Family: CA  49S  50S  Stokes/Cycle: 4  
 Ignition: Compress  Compress w/Glow Plug  Spark   
 Fuel Type(s): Dedicated  Flex-Fuel  Dual-Fuel  Bi-Fuel  Diesel  CNG   
 LNG  LPG  M85  M100  Other (specify) \_\_\_\_\_  
 Emiss Test Fuel(s): Diesel: 13 CCR 2282  40 CFR 86.1313-90  40 CFR 86.1313-94   
 CNG  LPG  M85  M100  Other (specify) \_\_\_\_\_  
 Exhaust ECS (e.g., OC, TWX, PTOX, IFI, TC, CAC): TC, CAC, OC, EGR  
 (Use abbreviations per **SAE J1930 SEP91**)

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.
B5.9-180 (1863)	180 @ 2500	88 (74)	FP:3921920 IN:3926818	N/A	3928655	3926233 3929433

Date Issued:

Revisions:

SUBMITTED

OCT 24 1995