

State of California  
AIR RESOURCES BOARD

EXECUTIVE ORDER A-21-146

Relating to Certification of New Heavy-Duty Motor 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 Cummins Engine Company, Inc. 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: Compressed Natural Gas or Liquid Natural Gas (CNG or LNG)

<u>Engine Family</u>	<u>Liters (Cubic Inches)</u>	<u>Exhaust Emission Control Systems and Special Features</u>
TCE359D1CAAW (493A)	5.9 (359)	Oxidation Catalytic Converter Turbocharger Charge Air Cooler Engine Control Module Heated Oxygen Sensor

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</u>	<u>Carbon Monoxide</u>	<u>Nitrogen Oxides</u>	<u>Particulates</u>
1.2	15.5	5.0	0.10

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

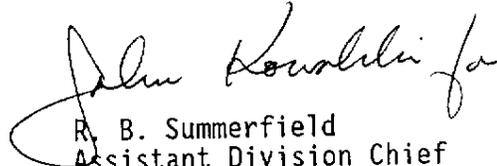
<u>Engine Family</u>	<u>Non-Methane Hydrocarbons</u>	<u>Carbon Monoxide</u>	<u>Nitrogen Oxides</u>	<u>Particulates</u>
TCE359D1CAAW (493A)	0.6	8.5	0.9	0.02

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 27<sup>th</sup> day of November 1995.

  
R. B. Summerfield  
Assistant Division Chief  
Mobile Source Division

1996 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET  
HEAVY-DUTY DIESEL-STANDARD ENGINES

Manufacturer Cummins Engine Company, Inc. Engine Family (493A) TCE359D1CAAW  
 Displacement: 5.9 Liters / 359 Cubic Inches  
 Maximum Rated Power: 195 HP @ 2800 RPM Engine Configuration: I-6  
 Ignition: Compression      Compression with Glow Plug      Spark X  
 Fuel Type(s): Dedicated X Flex-Fuel      Dual-Fuel      Diesel      M100      M85       
                   CNG X LNG X LPG      Other (specify)       
 Diesel Cert Fuel: 13 CCR 2282      40 CFR 86.1313-90      40 CFR 86.1313-94       
 Primary Intended Service Class: LHD      MHD X HHD      Urban Bus       
 Exhaust ECS (include MFI, TC, CAC): PCM, OC, (TC, CAC), HO2S  
 (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.
B5.9-195G (1683)	195 @ 2800	(70)	N/A <sup>(*)</sup>	3922724	N/A	3927832
<p>(*) Fuel systems for LNG application may use the following part numbers:                  ① 3088827 / LNG fuel system                  ② 3096649 / LNG fuel system</p>						

Date Issued:

Revisions: