

State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER A-21-209-1

Relating to Certification of New Heavy-Duty Engines and Vehicles

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 1998 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) over 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>
WCEXH0855NAC (093A3)	14.0	(855)	Turbocharger Charge Air Cooler Powertrain Control Module

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	4.0	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>
0.4	0.8	3.2	0.09

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.).

BE IT FURTHER RESOLVED: That the aforementioned engine family has been conditionally certified subject to the following conditions:

1. Any engine which employs a defeat device shall not be covered by this Executive Order.
2. Within 120 days following the issuance of Executive Order A-21-209, the manufacturer must show cause, to the satisfaction of the Executive Officer or his designee, that the strategy for fuel injection timing, including timing during the fuel economy mode, is not a defeat device.

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 11th day of May 1998.



R. B. Summerfield, Chief
Mobile Source Operations Division

LARGE ENGINE MODEL SUMMARY

11/3/97

Manufacturer: **Cummins Engine Company, Inc.**

Process Code: **New Submission**

EPA Engine Family: **WCExH0855NAC**

Manufacturer Family Name: **093A3**

1.Engine Code	2.Engine Model	3.BHP@RPM (SAE Gross)	4.Fuel Rate: mm/stroke @ peak HP (for diesel only)	5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only)	6.Torque @ RPM (SEA Gross)	7.Fuel Rate: mm/stroke@peak torque	8.Fuel Rate: (lbs/hr)/@peak torque	9.Emission Control Device Per SAE J1930
CPL2389								
FR10103	N14-425E+	410@1800	222	134.8	1550@1200	275	111.4	PCM, TC, CAC
FR10102	N14-425E+	410@1800	222	134.8	1450@1200	257	103.8	PCM, TC, CAC
FR10101	N14-370E+	389@1800	208	126.6	1450@1200	257	103.8	PCM, TC, CAC
FR10100	N14-370E+	370@1800	196	119.0	1450@1200	257	103.8	PCM, TC, CAC
FR10099	N14-370E+	389@1800	208	126.6	1400@1200	248	100.3	PCM, TC, CAC
FR10098	N14-370E+	370@1800	196	119.0	1400@1200	248	100.3	PCM, TC, CAC
FR10135	N14-370E+	389@1800	208	126.6	1450@1200	257	103.8	PCM, TC, CAC
FR10097	N14-350E+	368@1800	195	118.3	1400@1200	248	100.3	PCM, TC, CAC
FR10096	N14-350E+	350@1800	184	111.8	1400@1200	248	100.3	PCM, TC, CAC
FR10095	N14-370 ESP+	330@1800	175	105.5	1350@1200	238	96.5	PCM, TC, CAC
FR10094	N14-330E+	345@1800	182	110.3	1350@1200	238	96.5	PCM, TC, CAC
FR10093	N14-330E+	330@1800	175	105.5	1350@1200	238	96.5	PCM, TC, CAC
SC10267		410@1800	222	134.8	1550@1800	275	111.4	PCM, TC, CAC

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LARGE ENGINE MODEL SUMMARY

Manufacturer: **Cummins Engine Company, Inc.** Process Code: **Running Change**

EPA Engine Family: **WCExH0855NAB**

Manufacturer Family Name: **093A3**

1. Engine Code	2. Engine Model	3. BHP @ RPM (SAE Gross)	4. Fuel Rate: mm/stroke @ peak HP (for diesel only)	5. Fuel Rate: (lb/hr) @ peak HP (for diesels only)	6. Torque @ RPM (SEA Gross)	7. Fuel Rate: mm/stroke @ peak torque	8. Fuel Rate: (lb/hr) @ peak torque	9. Emission Control Device Per SAE J1930
CPL2389								
FR10195	N14-350E+	350@1800	184	111.8	1350@1200	238	96.5	PCM, TC, CAC
FR10196	N14-370E+	370@1800	196	119.0	1450@1200	257	103.8	PCM, TC, CAC
SC10252		350@1800	184	111.8	1450@1200	257	103.8	PCM, TC, CAC
SC10253		370@1800	196	119.0	1550@1200	275	111.4	PCM, TC, CAC