

State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER A-21-278
Relating to Certification of New Heavy-Duty Engines and Vehicles

CUMMINS ENGINE COMPANY, INC.

Pursuant to the authority vested in the Air Resources Board at Sections 43100, 43101, and 43102 of the Health and Safety Code; and

Pursuant to the authority vested in the undersigned at Sections 39515 and 39516 of the Health and Safety Code and Executive Order G-45-9; and

Pursuant to the December 15, 1998 Settlement Agreement between the Air Resources Board and Cummins Engine Company, Inc. and any modifications to the Settlement Agreement;

IT IS ORDERED AND RESOLVED: That the following 2000 model-year Cummins Engine Company, Inc. 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

<u>Engine Family</u>	<u>Displacement</u>		<u>Exhaust Emission Control Systems and Special Features</u>
	<u>Liters</u>	<u>Cubic Inches</u>	
YCEXH0661MAH (353Q)	11.0	661	Turbocharger Charge Air Cooler Powertrain Control Module

The engine models and codes are listed on attachments.

BE IT ORDERED AND RESOLVED: That the following are the certification exhaust emission standards for this engine family in grams per brake horsepower-hour under the Federal Test Procedure ("FTP") for Heavy-Duty Diesel Engines (Title 13, California Code of Regulations, Section 1956.8):

	<u>Total Hydrocarbons</u>	<u>Carbon Monoxide</u>	<u>Nitrogen Oxides</u>	<u>Particulate Matter</u>
"FTP"	1.3	15.5	4.0	0.10

BE IT FURTHER RESOLVED: That pursuant to the Settlement Agreement and any modifications thereof, the aforementioned engine family is also subject to the following emission standards, in grams per brake horsepower-hour, under the EURO III tests in the Settlement Agreement, and a "Not-to-Exceed" nitrogen oxides emission standard of 7.0 grams per brake horsepower-hour:

	<u>Total Hydrocarbons</u>	<u>Carbon Monoxide</u>	<u>Nitrogen Oxides</u>	<u>Particulate Matter</u>
"EURO III"	1.3	15.5	6.0	0.10

BE IT FURTHER RESOLVED: That the following are the certification exhaust emission values for this engine family in grams per brake horsepower-hour:

	Total			
	<u>Hydrocarbons</u>	<u>Carbon Monoxide</u>	<u>Nitrogen Oxides</u>	<u>Particulate Matter</u>
"FTP"	0.2	0.8	3.9	0.07
"EURO III"	0.1	0.3	5.5	0.04

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, Sections 2035 *et seq.*).

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

1. The Settlement Agreement is in effect.
2. The manufacturer is in compliance with all applicable certification requirements of the Settlement Agreement.

Engines certified under this Executive Order must conform to all applicable California emission regulations and to all applicable terms and conditions of the Settlement Agreement.

The Bureau of Automotive Repair will be notified by copy of this order and attachments.

Executed at El Monte, California this 29th day of December 1999.

Raphael Summerfield
 per R. B. Summerfield, Chief
 Mobile Source Operations Division

Engine Model Summary Form

Manufacturer: Cummins Engine Company, Inc.
Engine category: On-highway HDDE
EPA Engine Family: YCEXH0661MAH
Mfr Family Name: 353Q
Process Code: New Submission

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
2350;FR2807	ISM 500	500@1800	277	168.1	1550@1200	272	110.1	PCM, TC, CAC
2350;FR2806	ISM 500	500@1800	277	168.1	1550@1200	272	110.1	PCM, TC, CAC
2350;FR2569	ISM 425	425@1800	228	138.4	1550@1200	272	110.1	PCM, TC, CAC
2350;FR2697	ISM 425	435@1800	234	142.0	1550@1200	272	110.1	PCM, TC, CAC
2350;FR2860	ISM 425VSP	435@1800	234	142.0	1450@1200	253	102.4	PCM, TC, CAC
2350;FR2802	ISM 425	435@1800	234	142.0	1450@1200	253	102.4	PCM, TC, CAC
2350;FR2803	ISM 425ST1	425@1800	228	138.4	1450@1200	253	102.4	PCM, TC, CAC
2350;FR2804	ISM 380ST1	380@1800	203	123.2	1450@1200	253	102.4	PCM, TC, CAC
2608;FR2571	ISM 450	450@1800	249	151	1450@1200	259	105	PCM, TC, CAC
2608;FR2572	ISM 450	450@1800	249	151	1450@1200	259	105	PCM, TC, CAC
2608;FR2469	ISM 400	400@1800	213	129	1450@1200	259	105	PCM, TC, CAC
2608;FR2688	ISM 400	400@1800	213	129	1350@1200	245	99	PCM, TC, CAC
2608;FR2446	ISM 400	400@1800	213	129	1450@1200	259	105	PCM, TC, CAC
2608;FR2663	ISM 410	410@1800	219	133	1450@1200	259	105	PCM, TC, CAC
2608;FR2470	ISM 370	385@1800	203	123	1350@1200	245	99	PCM, TC, CAC
2608;FR2449	ISM 370	385@1800	203	123	1350@1200	245	99	PCM, TC, CAC
2608;FR2611	ISM 370	385@1800	203	123	1450@1200	245	99	PCM, TC, CAC
2608;FR2574	ISM 370	370@1800	194	118	1450@1200	259	105	PCM, TC, CAC
2608;FR2576	ISM 370	370@1800	194	118	1350@1200	245	99	PCM, TC, CAC
2608;FR2575	ISM 370ESP	370@1800	194	118	1350@1200	245	99	PCM, TC, CAC
2608;FR2452	ISM 350	365@1800	191	116	1350@1200	245	99	PCM, TC, CAC
2608;FR2471	ISM 350	365@1800	191	116	1350@1200	245	99	PCM, TC, CAC
2608;FR2579	ISM 350	350@1800	181	110	1350@1200	245	99	PCM, TC, CAC
2608;FR2577	ISM 350ESP	350@1800	181	110	1350@1200	245	99	PCM, TC, CAC
2608;FR2580	ISM 335V	350@1800	181	110	1450@1200	259	105	PCM, TC, CAC
2608;FR2612	ISM 335VSP	350@1800	181	110	1350@1200	245	99	PCM, TC, CAC
2608;FR2472	ISM 330	340@1800	176	107	1350@1200	245	99	PCM, TC, CAC
2608;FR2582	ISM 330	330@1800	171	104	1350@1200	245	99	PCM, TC, CAC