File

State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER U-R-2-55
Relating to Certification of New Heavy-Duty Off-Road Equipment Engines

CUMMINS ENGINE COMPANY, INC.

Pursuant to the authority vested in the Air Resources Board at Sections 43000.5, 43013, and 43018 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

IT IS ORDERED AND RESOLVED: That the following diesel engines and exhaust emission control systems produced by the manufacturer are certified as described below for use in heavy-duty off-road equipment:

Model Year: 2000

Typical Equipment Usage: Crane, Loader, Tractor, Dozer, Pump, and Compressor

Engine Power Ratings Range: 175 – 750 horsepower, inclusive

Fuel Type: Diesel

Engine Family	Displacement Liters	Displacement Cubic Inches	Exhaust Emission Control Systems and Special Features
YCEXL0505AAA (A412)	8.3	505	Turbocharger Charge Air Cooler

The engine models and codes are listed on attachments. Production engines shall be in all material respects the same as those for which certification is granted.

The exhaust emission certification standards and certification values in grams per brake horsepower-hour (g/bhp-hr) for total hydrocarbons (THC), carbon monoxide (CO), nitrogen oxides (NOx), and particulate matter (PM), and the opacity-of-smoke certification standards and certification values in percent (%) during acceleration (Accel), lugging (Lug), and the peak-values from either mode (Peak) for this engine family are as follows (Title 13, California Code of Regulations, Section 2423):

	Exhaust Emissions (g/bhp-hr)				Smoke Opacity (%)		
	THC	CO	NOx	PM	Accel	Lug	Peak
Standard	1.0	8.5	6.9	0.4	20	15	50
Certification	0.3	0.6	5.7	0.2	5	2	11

BE IT FURTHER RESOLVED: That the engine models listed on the attachments with engine power ratings less than 175 horsepower are not covered by this Executive Order.

BE IT FURTHER RESOLVED: That the listed engine models comply with "Exhaust Emission Standards and Test Procedures—Heavy-Duty Off-Road Diesel-Cycle Engines" (Title 13, California Code of Regulations, Section 2423) for the aforementioned model-year.

BE IT FURTHER RESOLVED: That the listed engine models also comply with "Emission Control Labels—1996 and Later Heavy-Duty Off-Road Diesel-Cycle Engines" (Title 13, California Code of Regulations, Section 2424) for the aforementioned model-year.

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 2425 *et seq.*).

Engines certified under this Executive Order must conform to all applicable California emission regulations.

Executed at El Monte, California this 30th day of December 1999.

Raphael Susnowitz

for R. B. Summerfield, Chief
Mobile Source Operations Division

Engine Model Summary Form

Manufacturer: **Cummins Engine Company**

Engine category: **Nonroad Over 50 Hp**

EPA Engine Family: **YCEXL0505AAA**

Mfr Family Name: **A412**

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
1943;FR9874	C8.3-C	215@2200	111	82.3	642@1500	127	64.0	TC
1943;FR90181	C8.3-C	215@2200	111	82.3	642@1500	127	64.0	TC
1943;FR90416	C8.3-C	215@2200	111	82.3	642@1500	127	64.0	TC
1943;FR9873	C8.3-C	205@2200	106	78.9	636@1500	125	63.4	TC
1943;FR90178	C8.3-C	205@2200	106	78.9	636@1500	125	63.4	TC
1943;FR90118	C8.3-C	205@2200	106	78.9	636@1500	125	63.4	TC
1943;FR9871	C8.3-C	190@2200	98	73.0	590@1500	116	58.5	TC
1943;FR90042	C8.3-C	185@2200	96	71.0	575@1500	110	55.8	TC
1943;FR9870	C8.3-C	185@2200	96	71.0	575@1500	110	55.8	TC
1943;FR90330	C8.3-C	185@2200	96	71.0	575@1500	110	55.8	TC
1943;FR90417	C8.3-C	185@2200	96	71.0	575@1500	110	55.8	TC
1943;FR9869	C8.3-C	170@2200	92	68.0	560@1500	111	56.0	TC
1943;FR90225	C8.3-C	170@2200	92	68.0	520@1500	105	52.9	TC
2060;FR90043	C8.3-C	205@2000	115	77.6	636@1500	126	63.9	TC
2060;FR90113	C8.3-C	195@1900	112	71.8	563@1600	115	62.2	TC
2060;FR90044	C8.3-C	180@2000	98	66.2	575@1500	126	63.9	TC
2060;FR90168	C8.3-C	181@2000	101	67.8	626@1500	124	62.7	TC
2060;FR90350	C8.3-C	165@2100	89	66.1	550@1400	109	51.6	TC
2060;FR90117	C8.3-C	150@2200	80	59.1	475@1500	85	43.2	TC
2061;FR90177	C8.3-C	201@2500	99	83.7	574@1500	110	55.8	TC
2061;FR90041	C8.3-C	177@2500	87	73.7	507@1500	98	49.5	TC
2185;FR90040	C8.3-C	215@2500	106	89.1	610@1500	119	60.0	TC
2120;FR90119	C8.3-C	173@2380	87	68.9	496@1600	98	51.8	TC
2120;FR90353	C8.3-C	173@2300	89	69.0	496@1500	99	50.0	TC
2216;FR90240	6CT8.3-G2	207@1800	125	75.9				TC
2216;FR90241	6CT8.3-G2	181@1500	131	66.2				TC