State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER U-R-2-50
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 the 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: Loader, Pump, and Generator Set

Engine Power Ratings Range: 175 – 750 horsepower, inclusive

Fuel Type: Diesel

	Displacement		Exhaust Emission Control
Engine Family	Liters	Cubic Inches	Systems and Special Features
YCEXL0661AAA (A353)	11.0	661	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	0.2	1.2	6.6	0.1	18	2	41

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 28th 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 CI**

EPA Engine Family: **YCEXL0661AAA**

Mfr Family Name: **A353**

Process Code: **New Submission**

U-R-2-50

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
2363:FR 2520	M11-C	350@2100	162	114.9	1150@1300	214	93.9	EM, TC
2363:FR 2521	M11-C*	350@2100	162	114.9	1150@1300	214	93.9	EM,TC
2363:FR 2522	M11-C	350@2100	162	114.9	1150@1300	214	93.9	EM,TC
2363:FR 2523	M11-C	350@2100	162	114.9	1150@1300	214	93.9	EM,TC
2363:FR 2518	M11-C	350@2100	162	114.9	1075@1300	202	88.7	EM,TC
2363:FR 2519	M11-C*	350@2100	162	114.9	1075@1300	202	88.7	EM,TC
2363:FR 2528	M11-C	350@2100	162	114.9	1075@1300	202	88.7	EM,TC
2363:FR 2529	M11-C	350@2100	162	114.9	1075@1300	202	88.7	EM,TC
2363:FR 2925	M11-C	350@2100	162	114.9	1075@1300	202	88.7	EM,TC
2363:FR 2524	M11-C	335@1800	174	105.7	1075@1300	202	88.7	EM,TC
2363:FR 2812	M11-C	330@2100	154	109.0	1150@1300	214	93.9	EM,TC
2363:FR 2497	M11-C*	330@2100	154	109.0	1075@1300	202	88.7	EM,TC
2363:FR 2498	M11-C	330@2100	154	109.0	1075@1300	202	88.7	EM,TC
2363:FR 2690	M11-C	330@2100	154	109.0	1075@1300	202	88.7	EM,TC
2363:FR 2509	M11-C	330@2100	154	109.0	1075@1300	202	88.7	EM,TC
2363:FR 2527	M11-C	315@1800	165	100.0	1060@1300	198	87.0	EM,TC
2363:FR 2661	M11-C	315@1800	165	100.0	1060@1300	198	87.0	EM,TC
2336:FR 2502	M11-C	320@2000	157	106.1	910@1300	171	74.8	EM,TC
2336:FR 2503	M11-C	320@2000	157	106.1	910@1300	171	74.8	EM,TC
2336:FR 2504	M11-C	310@2100	148	104.9	1050@1300	195	85.6	EM,TC
2336:FR 2662	M11-C	310@2100	148	104.9	1050@1300	195	85.6	EM,TC
2336:FR 2505	M11-C	290@2100	169	102.6	975@1300	182	79.7	EM,TC
2503:FR 2670	M11-C	300@2100	144	102.1	1015@1300	192	84.0	EM,TC
2503:FR 2698	M11-C	300@2100	144	102.1	1015@1200	192	84.0	EM,TC
2503:FR 2699	M11-C	295@2000	146	98.5	875@1400	161	76.0	EM,TC
2503:FR 2811	M11-C	290@2100	141	99.5	1015@1300	192	84.0	EM,TC

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