

State of California  
AIR RESOURCES BOARD

EXECUTIVE ORDER U-R-2-104  
Relating to Certification of New Off-Road Compression-Ignition Equipment Engines

CUMMINS ENGINE COMPANY, INC.

Pursuant to the authority vested in the Air Resources Board (Board) by Sections 43013, 43018, 43101, 43102, 43104 and 43105 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 compression-ignition engine and exhaust emission control system produced by the manufacturer are certified as described below for use in off-road equipment:

Model Year: 2001

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

Fuel Type: Diesel

<u>Engine Family</u>	<u>Engine Displacement (liters)</u>	<u>Useful Life (hours)</u>	<u>Exhaust Emission Control Systems and Special Features</u>
1CEXL0661AAA	10.8	8000	Direct Diesel Injection Turbocharger Charge Air Cooler

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

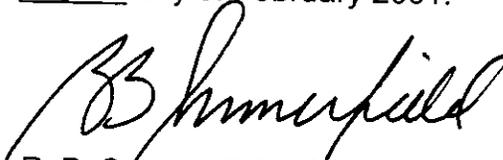
<u>Engine Power Rating (kw)</u>	<u>Emission Standard Category</u>		<u>Exhaust Emissions (g/kw-hr)</u>				<u>Smoke Opacity (%)</u>		
			<u>THC</u>	<u>CO</u>	<u>NOx</u>	<u>PM</u>	<u>Accel</u>	<u>Lug</u>	<u>Peak</u>
130≤KW<225	Tier 1	Standard	1.3	11.4	9.2	0.54	20	15	50
		Certification	0.3	1.6	8.8	0.16	18	2	41

BE IT FURTHER RESOLVED: That the listed engine models also comply with "Emission Control Labels— 1996 and Later Off-Road Compression-Ignition 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 and 2426).

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

Executed at El Monte, California this 6<sup>th</sup> day of February 2001.

  
R. B. Summerfield, Chief  
Mobile Source Operations Division

# Engine Model Summary Form

Manufacturer: **Cummins Engine Company**  
 Engine category: **Nonroad CI**  
 EPA Engine Family: **1CEXL0661AAA**  
 Mfr Family Name: **A353**  
 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
<del>2363:FR 2520*</del>	<del>M11-C</del>	<del>350@2100</del>	<del>162</del>	<del>114.9</del>	<del>1150@1300</del>	<del>214</del>	<del>93.9</del>	<del>EM, TC, CAC</del>
2119:FR2407	M11-C	280@2100	137	96.8	950@1300	180	78.9	EM, TC, CAC
2336:FR2505	M11-C	290@2100	169	102.6	975@1300	182	79.7	EM, TC
2503:FR 2669	M11-C	245@2100	121	85.6	750@1300	144	63.2	EM, TC
2503:FR 2672	M11-C	245@2100	121	85.6	750@1300	144	63.2	EM, TC
2503:FR 2673	M11-C	245@2000	126	85.3	780@1300	150	65.6	EM, TC
2503:FR 2674	M11-C	225@2100	113	80.0	760@1300	146	64.0	EM, TC
2503:FR 2679	M11-C	250@2100	123	87.2	845@1300	161	70.5	EM, TC
2503:FR 2680	M11-C	245@1800	136	82.8	860@1300	165	71.7	EM, TC
2503:FR 2684	M11-C	225@1800	127	76.9	790@1300	152	66.4	EM, TC
2503:FR2668	M11-C	290@2100	141	99.5	980@1300	185	81.3	EM, TC
2503:FR2670	M11-C	300@2100	144	102.1	1015@1300	192	84.0	EM, TC
2503:FR2671	M11-C	270@2100	132	93.5	950@1300	180	78.9	EM, TC
2503:FR2675	M11-C	280@2100	137	96.8	950@1300	180	78.9	EM, TC
2503:FR2676	M11-C	275@1800	150	91.3	950@1300	180	78.9	EM, TC
2503:FR2677	M11-C	270@2000	137	92.6	920@1300	175	76.7	EM, TC
2503:FR2678	M11-C	265@1700	152	87.2	900@1300	171	75.1	EM, TC
2503:FR2681	M11-C	260@2100	128	90.4	845@1300	161	70.5	EM, TC
2503:FR2682	M11-C	270@2100	132	93.5	885@1300	169	73.9	EM, TC
2503:FR2683	M11-C	290@2100	141	99.5	885@1300	169	73.9	EM, TC
2503:FR2685	M11-C	275@1800	150	90.8	975@1300	185	81.0	EM, TC
2503:FR2686	M11-C	250@2100	123	87.2	845@1300	161	70.5	EM, TC
2503:FR2691	M11-C	290@2100	141	99.5	980@1300	185	81.3	EM, TC
2503:FR2698	M11-C	300@2100	144	102.1	1015@1200	192	84.0	EM, TC
2503:FR2699	M11-C	295@2000	146	98.5	875@1400	161	76.0	EM, TC
2503:FR2811	M11-C	290@2100	141	99.5	1015@1300	192	84.0	EM, TC
2503:FR2813	M11-C	290@2100	141	99.5	980@1300	185	81.3	EM, TC
2503:FR2862	M11-C	270@2100	132	93.5	950@1300	180	78.9	EM, TC

CAC  
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2916:FR290	M11-C	300@1850	162	2	1075@1300	204	89.5	EM, TC, CAC
2917:FR2881	M11-C	290@2100	141	99.5	980@1300	185	81.3	EM, TC
2917:FR2882	M11-C	245@2100	121	85.6	750@1300	144	63.2	EM, TC
2917:FR2883	M11-C	300@2100	144	102.1	1015@1300	192	84.0	EM, TC
2917:FR2884	M11-C	270@2100	132	93.5	950@1300	180	78.9	EM, TC
2917:FR2885	M11-C	245@2100	121	85.6	750@1300	144	63.2	EM, TC
2917:FR2886	M11-C	245@2000	126	85.3	780@1300	150	65.6	EM, TC
2917:FR2887	M11-C	225@2100	113	80.0	760@1300	146	64.0	EM, TC
2917:FR2888	M11-C	280@2100	137	96.8	950@1300	180	78.9	EM, TC
2917:FR2889	M11-C	275@1800	150	91.3	950@1300	180	78.9	EM, TC
2917:FR2890	M11-C	270@2000	137	92.6	920@1300	175	76.7	EM, TC
2917:FR2891	M11-C	265@1700	152	87.2	900@1300	171	75.1	EM, TC
2917:FR2892	M11-C	250@2100	123	87.2	845@1300	161	70.5	EM, TC
2917:FR2893	M11-C	245@1800	136	82.8	860@1300	165	71.7	EM, TC
2917:FR2894	M11-C	260@2100	128	90.4	845@1300	161	70.5	EM, TC
2917:FR2895	M11-C	270@2100	132	93.5	885@1300	169	73.9	EM, TC
2917:FR2896	M11-C	290@2100	141	99.5	885@1300	169	73.9	EM, TC
2917:FR2897	M11-C	225@1800	127	76.9	790@1300	152	66.4	EM, TC
2917:FR2898	M11-C	275@1800	150	90.8	975@1300	185	81.0	EM, TC
2917:FR2899	M11-C	250@2100	123	87.2	845@1300	161	70.5	EM, TC
2917:FR2900	M11-C	290@2100	141	99.5	980@1300	185	81.3	EM, TC
2917:FR2901	M11-C	295@2100	146	98.5	875@1400	161	76.0	EM, TC
2917:FR2902	M11-C	290@2100	141	99.5	1015@1300	192	84.0	EM, TC
2917:FR2904	M11-C	290@2100	141	99.5	980@1300	185	81.3	EM, TC
2918:FR2869	M11-C	290@2100	169	102.6	975@1300	182	79.7	EM, TC

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