California Environmental Protection Agency AIR RESOURCES BOARD	CUMMINS INC.	EXECUTIVE ORDER U-R-002-0590-1 New Off-Road Compression-Ignition Engines

Pursuant to the authority vested in the Air Resources 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-02-003;

IT IS ORDERED AND RESOLVED: That the following compression-ignition engines and emission control systems produced by the manufacturer are certified as described below for use in off-road equipment. Production engines shall be in all material respects the same as those for which certification is granted.

MODEL YEAR	ENGINE FAMILY	DISPLACEMENT (liters)	FUEL TYPE	USEFUL LIFE (hours)
2013	DCEXL08.9AAI	8.9	Diesel	8000

SPECIAL FEATURES & EMISSION CONTROL SYSTEMS	TYPICAL EQUIPMENT APPLICATION
Electronic Direct Injection, Turbocharger, Charge Air Cooler, Electronic Control Module, Exhaust Gas Recirculation, Diesel Oxidation Catalyst, and Periodic Trap Oxidizer	Crane, Loader, Tractor, Dozer, Pump, Compressor, and Generator Set

The engine models and codes are attached.

The following are the exhaust certification standards (STD) and certification levels (CERT) for hydrocarbon (HC), oxides of nitrogen (NOx), or non-methane hydrocarbon plus oxides of nitrogen (NMHC+NOx), carbon monoxide (CO), and particulate matter (PM) in grams per kilowatt-hour (g/kw-hr), and the opacity-of-smoke certification standards and certification levels in percent (%) during acceleration (Accel), lugging (Lug), and the peak value from either mode (Peak) for this engine family (Title 13, California Code of Regulations, (13 CCR) Section 2423):

RATED POWER CLASS	EMISSION STANDARD CATEGORY		EXHAUST (g/kw-hr)					OPACITY (%)		
			HC	NOx	NMHC+NOx	CO	PM	ACCEL	LUG	PEAK
130 ≤ kW < 560	Interim Tier 4 /ALT NOx	STD	0.19	2.0	N/A	3.5	0.02	N/A	N/A	N/A
		CERT	0.01	1.8	--	0.02	0.01	--	--	--

BE IT FURTHER RESOLVED: That for the listed engine models, the manufacturer has submitted the information and materials to demonstrate certification compliance with 13 CCR Section 2424 (emission control labels), and 13 CCR Sections 2425 and 2426 (emission control system warranty).

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

This Executive Order is only granted to the engine family and model-year listed above. Engines in this family that are produced for any other model-year are not covered by this Executive Order.

This Executive Order hereby supersedes Executive Order U-R-002-0590 dated August 2, 2012.

Executed at El Monte, California on this 21st day of October 2013.

Erik White, Chief
Mobile Source Operations Division

CANCELLED

Engine Model Summary Template

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Engine Family	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
CEXL08.9AAI	3600:FR93004	QSL8.9	365@2100	185	130	1113@1500	219	109.7	Torque map DDI,ECM,TC,CAC
CEXL08.9AAI	3600:FR92615	QSL8.9	340@1800	200	120	1100@1400	222	103.5	DDI,ECM,TC,
CEXL08.9AAI	3600:FR92611	QSL8.9	350@2100	177	124	1100@1500	213	106.3	DDI,ECM,TC,
CEXL08.9AAI	3144:FR92612	QSL8.9	320@2100	166	116	1050@1500	208	104.1	DDI,ECM,TC,
CEXL08.9AAI	3144:FR92665	QSL8.9	300@2100	158	110	1020@1500	203	101.5	DDI,ECM,TC,
CEXL08.9AAI	3144:FR92966	QSL8.9	320@2200	160	117	1020@1500	195	97.6	DDI,ECM,TC,
CEXL08.9AAI	3144:FR92661	QSL8.9	290@2200	149	109	1000@1500	190	95.2	DDI,ECM,TC,
CEXL08.9AAI	3144:FR93007	QSL8.9	300@2000	162	108	1000@1450	200	96.4	DDI,ECM,TC,
CEXL08.9AAI	3144:FR92616	QSL8.9	320@1800	185	111	1000@1400	195	90.8	DDI,ECM,TC,
CEXL08.9AAI	3175:FR92967	QSL8.9	275@2200	134	98	895@1500	159	79.6	DDI,ECM,TC,
CEXL08.9AAI	3175:FR92968	QSL8.9	260@2200	134	98	835@1500	159	79.8	DDI,ECM,TC,
CEXL08.9AAI	3175:FR93005	QSL8.9	250@2200	141	100	768@1600	171	83.9	DDI,ECM,TC,
CEXL08.9AAI	3175:FR92664	QSL8.9	230@2200	132	93	670@1600	142	71.3	DDI,ECM,TC,
CEXL08.9AAI	3175:FR92613	QSL8.9	300@2000	166	106	1070@1400	210	101	DDI,ECM,TC,
CEXL08.9AAI	3175:FR93006	QSL8.9	285@2000	160	102	1070@1400	210	101.2	DDI,ECM,TC,
CEXL08.9AAI	3175:FR92614	QSL8.9	265@2000	151	96	800@1400	156	73.1	DDI,ECM,TC,
CEXL08.9AAI	3597FR:20323	QSX12	460@2100	252	178	1600@1400	318	150	DDI,ECM,TC,
CEXL08.9AAI	3597:FR20324	QSX12	430@2100	240	170	1600@1400	318	150	DDI,ECM,TC,
CEXL08.9AAI	3597:FR20325	QSX12	400@2100	221	157	1600@1400	318	150	DDI,ECM,TC,
CEXL08.9AAI	3597:FR20326	QSX12	400@2100	221	157	1500@1400	297	140	DDI,ECM,TC,
CEXL08.9AAI	3597:FR20320	QSX12	375@2100	205	145	1450@1400	288	136	DDI,ECM,TC,
CEXL08.9AAI	3597:FR20327	QSX12	350@2100	189	134	1350@1400	269	127	DDI,ECM,TC,
CEXL08.9AAI	3597:FR20328	QSX12	335@2100	182	129	1250@1400	252	119	DDI,ECM,TC,
CEXL08.9AAI	3597:FR20343	QSX12	290@2100	164	116	1090@1400	218	103	DDI,ECM,TC,
CEXL08.9AAI	3597:FR20337	QSX12	355@2000	195	132	1250@1400	252	119	DDI,ECM,TC,
CEXL08.9AAI	3597:FR20344	QSX12	434@1900	252	162	1600@1400	317	149	DDI,ECM,TC,
CEXL08.9AAI	3597:FR20336	QSX12	375@1900	213	136	1350@1400	269	127	DDI,ECM,TC,
CEXL08.9AAI	3597:FR20329	QSX12	500@1800	299	181	1600@1400	318	150	DDI,ECM,TC,

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Engine Model Summary Template

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Engine Family	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
CEXL08.9AAI	3511:FR92977	QSL9-G	459@1800	263	163	N/A	N/A	N/A	DDI,ECM,TC,CAC
CEXL08.9AAI	3511:FR92865	QSL9-G	433@1800	247	153.3	N/A	N/A	N/A	DDI,ECM,TC,
CEXL08.9AAI	3511:FR92865	QSL9-G	370@1500	249	131	N/A	N/A	N/A	DDI,ECM,TC,
CEXL08.9AAI	3095:FR92543	QSB6.7	300@2500	123	104.1	760@1800	146	88.6	DDI,ECM,TC,
CEXL08.9AAI	3094:FR92980	QSB6.7	275@2500	123	103.3	730@1500	139	70.1	DDI,ECM,TC,
CEXL08.9AAI	3094:FR92544	QSB6.7	260@2500	112	94.7	730@1500	139	70.1	DDI,ECM,TC,
CEXL08.9AAI	3094:FR92545	QSB6.7	240@2500	105	88.2	730@1500	139	70.4	DDI,ECM,TC,
CEXL08.9AAI	3094:FR92546	QSB6.7	225@2500	98	82.8	655@1500	123	62.3	DDI,ECM,TC,
CEXL08.9AAI	3094:FR92981	QSB6.7	195@2500	87	73.3	565@1500	107	54.1	DDI,ECM,TC,
CEXL08.9AAI	3094:FR92985	QSB6.7	260@2200	119	87.9	730@1500	135	68.5	DDI,ECM,TC,
CEXL08.9AAI	3094:FR92552	QSB6.7	240@2200	111	82.0	697@1500	130	65.5	DDI,ECM,TC,
CEXL08.9AAI	3094:FR92553	QSB6.7	220@2200	104	76.8	700@1500	131	66	DDI,ECM,TC,
CEXL08.9AAI	3094:FR92554	QSB6.7	200@2200	95	70.4	685@1400	131	62.1	DDI,ECM,TC,
CEXL08.9AAI	3094:FR92563	QSB6.7	225@2100	109	77.5	700@1500	132	66.9	DDI,ECM,TC,
CEXL08.9AAI	3094:FR92565	QSB6.7	250@2000	126	84.8	730@1500	142	72	DDI,ECM,TC,
CEXL08.9AAI	3094:FR92566	QSB6.7	220@2000	111	75.1	700@1400	134	63.1	DDI,ECM,TC,
CEXL08.9AAI	3094:FR92987	QSB6.7	190@2000	99	66.7	597@1500	114	57.7	DDI,ECM,TC,
CEXL08.9AAI	3094:FR92574	QSB6.7	215@1800	123	74.4	685@1300	133	58.4	DDI,ECM,TC,
CEXL08.9AAI	3277:FR92976	QSB7-G	340@1800	199	114.2	N/A	N/A	N/A	DDI,ECM,TC,
CEXL08.9AAI	3277:FR92857	QSB7-G	314@1800	191	109.6	N/A	N/A	N/A	DDI,ECM,TC,
CEXL08.9AAI	3277:FR92857	QSB7-G	274@1500	195	95.1	N/A	N/A	N/A	DDI,ECM,TC,
CEXL08.9AAI	3277:FR93508	QSB7-G	256@1800	144	87.3	N/A	N/A	N/A	DDI,ECM,TC,
CEXL08.9AAI	3277:FR93508	QSB7-G	222@1500	155	78.4	N/A	N/A	N/A	DDI,ECM,TC,
CEXL08.9AAI	3094:FR93515	QSB7	250@2000	126	84.8	N/A	N/A	N/A	DDI,ECM,TC,
CEXL08.9AAI	3094:FR93516	QSB7	220@2000	111	75.1	N/A	N/A	N/A	DDI,ECM,TC,
CEXL08.9AAI	3094:FR93517	QSB7	190@2000	99	66.7	N/A	N/A	N/A	DDI,ECM,TC,
CEXL08.9AAI	3095:FR93786	QSB7	300@2000	153	103	N/A	N/A	N/A	DDI,ECM,TC,
CEXL08.9AAI	3600:FR92426	QSL8.9	380@2100	193	135	1200@1500	237	118.5	DDI,ECM,TC,

EGR, OC PTX

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Engine Model Summary Template

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Engine Family	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
CEXL08.9AAI	3597:FR20330	QSX12	475@1800	285	173	1600@1400	318	150	ECM & Prox DDI,ECM,TC,CAC
CEXL08.9AAI	3597:FR20331	QSX12	451@1800	268	163	1600@1400	318	150	DDI,ECM,TC,
CEXL08.9AAI	3597:FR20332	QSX12	430@1800	256	156	1500@1400	297	140	DDI,ECM,TC,
CEXL08.9AAI	3597:FR20333	QSX12	400@1800	237	144	1450@1400	288	136	DDI,ECM,TC,
CEXL08.9AAI	3597:FR20334	QSX12	375@1800	220	134	1350@1400	269	127	DDI,ECM,TC,
CEXL08.9AAI	3597:FR20335	QSX12	350@1800	206	125	1275@1400	257	121	DDI,ECM,TC,
CEXL08.9AAI	3597:FR20386	QSX12	490@1900	293	188	1600@1400	318	150	DDI,ECM,TC,
CEXL08.9AAI	3797:FR11013	QSX15-G	555@1800	314	190.7	N/A	N/A	N/A	DDI, TC, CAC,
CEXL08.9AAI	3797:FR11014	QSX15-G	626@1800	358	217.5	N/A	N/A	N/A	DDI, TC, CAC,
CEXL08.9AAI	3350:FR10762	QSX15-C	600@1800	358	217	2050 @ 1400	402	190	DDI, TC, CAC,
CEXL08.9AAI	3350:FR10780	QSX15-C	450@1800	268	163	1500 @ 1400	289	137	DDI, TC, CAC,
CEXL08.9AAI	3350:FR10778	QSX15-C	500@1800	297	180	1600 @ 1400	314	148	DDI, TC, CAC,
CEXL08.9AAI	3350:FR10777	QSX15-C	525@1800	309	188	1750 @ 1400	345	163	DDI, TC, CAC,
CEXL08.9AAI	3350:FR10776	QSX15-C	550@1800	324	196	1750 @ 1400	345	163	DDI, TC, CAC,
CEXL08.9AAI	3350:FR10775	QSX15-C	575@1800	340	206	1950 @ 1400	384	181	DDI, TC, CAC,
CEXL08.9AAI	3350:FR10768	QSX15-C	400@2100	213	151	1500 @ 1400	289	137	DDI, TC, CAC,
CEXL08.9AAI	3350:FR10766	QSX15-C	450@2100	241	171	1700 @ 1400	338	159	DDI, TC, CAC,
CEXL08.9AAI	3350:FR10765	QSX15-C	500@2100	266	188	1850 @ 1400	364	172	DDI, TC, CAC,
CEXL08.9AAI	3350:FR10764	QSX15-C	535@2100	285	202	1950 @ 1400	384	181	DDI, TC, CAC,
CEXL08.9AAI	3350:FR10763	QSX15-C	550@2100	293	208	2050 @ 1400	397	187	DDI, TC, CAC,
CEXL08.9AAI	3350:FR10985	QSX15-C	580@2100	311	220	2050 @ 1400	402	190	DDI, TC, CAC,

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