

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;

Pursuant to the July 1, 1999 Settlement Agreement (SA) between ARB and the Manufacturer, and any modifications thereof to the Settlement Agreement;

**IT IS ORDERED AND RESOLVED:** That the following compression-ignition engine and emission control system 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)
2005	5CEXL0540AAB	8.8	Diesel	8000
<b>SPECIAL FEATURES &amp; EMISSION CONTROL SYSTEMS</b>			<b>TYPICAL EQUIPMENT APPLICATION</b>	
Direct Diesel Injection, Turbocharger, Charge Air Cooler, Engine Control Module			Crane, Loader, Tractor, Dozer, Pump and Compressor	

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
225 ≤ kW < 450	Tier 3	<b>STD</b>	N/A	N/A	4.0	3.5	0.20	20	15	50
		<b>CERT</b>	--	--	3.9	3.2	0.16	5	2	13

**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.**

Executed at El Monte, California on this 23<sup>rd</sup> day of December 2004.

  
 Allen Lyons, Chief  
 Mobile Source Operations Division

# Engine Model Summary Form

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U-R-002-0293

**Manufacturer:** Cummins Inc.  
**Engine category:** Nonroad CI  
**EPA Engine Family:** 5CEXL0540AAB  
**Mfr Family Name:** B563  
**Process Code:** Running Change

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
8548;FR91672	QSL	350@2100	160	113.4	1120@1500	185	93.6	DDI, ECM, TC, CAC
8548;FR91672	QSL	350@2100	189	134.1	1120@1500	218	110.1	ECM, TC, CAC
8643;FR91520	QSL	350@2100	189	134.1	1120@1500	218	110.1	ECM, TC, CAC
8641;FR91518	QSL	365@2100	192	136.1	1113@1500	202	102.2	ECM, TC, CAC
8647;FR91689	QSL	305@2000	174	117.4	1109@1400	216	102.2	ECM, TC, CAC
8650;FR91527	QSL	280@2000	163	109.9	1000@1400	210	99.1	ECM, TC, CAC
8647;FR91524	QSL	300@2100	170	120.4	1010@1500	210	106.2	ECM, TC, CAC
0401;FR91674	QSL	325@2100	176	124.6	1050@1500	213	107.7	ECM, TC, CAC
8548;FR91672	QSL	350@2100	192	135.8	1120@1500	223	113.0	ECM, TC, CAC
8643;FR91520	QSL	350@2100	192	135.8	1120@1500	223	113.0	ECM, TC, CAC
0400;FR91673	QSL	345@1800	206	125.2	1095@1400	217	102.6	ECM, TC, CAC
8695;FR91546	QSL9-G2	364@1800	219	133.2	NA	NA	NA	ECM, TC, CAC
8695;FR91546	QSL9-G2	310@1500	213	107.6	NA	NA	NA	ECM, TC, CAC
0422;FR91709	QSL	280 @ 2000	164	110.3	1070 @ 1400	212	100.1	ECM, TC, CAC