

CUMMINS INC.

EXECUTIVE ORDER U-R-002-0590-2 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		
	FEATURES & EMISSION	CONTROL SYSTEMS	TYPICAL EQUIPMENT	APPLICATION		
Cooler	c Direct Injection, Turbo , Electronic Control Moc tion, Diesel Oxidation C Trap Oxidize	lule, Exhaust Gas atalyst, and Periodic	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):

POWER CLASS	EMISSION STANDARD CATEGORY		EXHAUST (g/kw-hr)					OPACITY (%)		
			НС	NOx	NMHC+NOx	СО	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	1.7	-	0.02	0.002	-		-

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 and cancels Executive Order U-R-002-0590-1 dated October 21, 2013.

Executed at El Monte, California on this

rik White, Chief

Mobile Source Operations Division

Engine Model Summary Template

U-R-002-0590=

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1/3/2012

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		9.Emission Control eDevice Per SAE J1930)
DCEXL08.9AAI	3511:FR92977	QSL9-G	459@1800	263	163	N/A	N/A	N/A	DDI,ECM,TC,CAC,EGR, OC,PTOX	PLUC
DCEXL08.9AAI	3511:FR92865	QSL9-G	433@1800	247	153.3	N/A	N/A	N/A	DDI,ECM,TC,CAC,EGR, QC,PTOX	
DCEXL08.9AAI	3511:FR92865	QSL9-G	370@1500	249	131	N/A	N/A	N/A	DDI,ECM,TC,CAC,EGR, OC,PTOX	
DCEXL08.9AAI	4564:FR94731	QSL9-G	433@1800	247	153.3	N/A	N/A	N/A	DDI,ECM,TC,CAC,EGR, ⊕C,PTOX	
DCEXL08.9AAI	4564:FR94731	QSL9-G	370@1500	249	153.3	N/A	N/A	N/A	DDI,ECM,TC,CAC,EGR, OC,PTOX	<u>†</u>