

## CUMMINS INC.

## EXECUTIVE ORDER U-R-002-0559-1

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)		
2011	BCEXL0275AAH	4.5	Diesel	8000		
SPECIAL	FEATURES & EMISSION	CONTROL SYSTEMS	TYPICAL EQUIPMENT APPLICATION			
Direct Dies	el Injection, Turbocharge and Electronic Control	er, Charge Air Cooler, Module	Loader, Tractor, Dozer, Pump, Compressor, and Generator			

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	EMISSION		EXHAUST (g/kw-hr)					OPACITY (%)		
POWER CLASS	STANDARD CATEGORY		нс	NOx	NMHC+NOx	со	PM	ACCEL	LUG	PEAK
56 ≤ kW < 75	Tier 3	STD	N/A	N/A	4.7	5.0	0.40	20	15	50
		CERT			4.3	1.0	0.39	8	2	14

**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-002-0559 dated September 3, 2010.

Executed at El Monte, California on this

day of September 2011.

Annette Hebert, Chief

Mobile Source Operations Division

## **Engine Model Summary Template**

U-12-002-0559-1 Attachmut 9/23/2011

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 torqu	9.Emission Control ueDevice Per SAE J1930
CEXL0275AAH	1472;FR91668	QSB4.5	99@2200	84	41.5	326@1300	111	32.3	DDI TC CAC
CEXL0275AAH	1472;FR91916	QSB4.5	99@2000	86	38.7	301@1300	96	28.1	DOI TO CAC
CEXL0275AAH	3057:FR92463	4BTAA3.3G7	99@1800	86.9	35.16			agega i aga galagan makata agama majara, s	EN,TC,CAC,
ICEXL0275AAH	FR30231	QSB3.3	99@2600	69	40	304@1600	98	36	EMTC,CAC,
CEXL0275AAH	FR30232	QSB3.3	99@2200	74	36	304@1600	96	34	EM,TC/CAC,
3CEXL0275AAH	FR92055	QSB3.3	80@2200	64	31	275@1400	88	27	EM, TC,CAC,
3CEXL0275AAH	FR92056	QSB3.3	85@2600	60	34	275@1400	93	29	EM, TC, CAC,
3CEXL0275AAH	FR93226	QSB3.3	99@2200	74	36	304@1600	96	34	EM/TC/CAC,
3CEXL0275AAH	FR92084	B3.3	85@2600	62	36	225@1500	70	23	EM, DFATC,
3CEXL0275AAH	FR92085	B3.3	80@2200	66	32	225@1500	70	23	EM, DFI,TC,
3CEXL0275AAH	FR92086	B3.3	76@2600	59	35	214@1500	65	22	∉M, DFI,†C,
3CEXL0275AAH	FR92233	B3.3	85@2400	67	36	239@1600	75	27	EM, DFI, C,

)) DI, Ecm, Tc, cac