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 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)					
2006	6CEXL0661AAF	10.8	Diesel	8000					
	FEATURES & EMISSION		TYPICAL EQUIPMENT APPLICATION						
Direct Dies	sel Injection, Turbocharge Engine Control Mo	er, Charge Air Cooler, odule	Crane, Loader and Compressor						

The engine models and codes are attached.

The following are the exhaust certification standards (STD), or family emission limit(s) (FEL) as applicable, 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			E	EXHAUST (g/kw-l		OPACITY (%)				
POWER CLASS	STANDARD CATEGORY		HC	NOx	NMHC+NOx	co	PM	ACCEL	LUG	PEAK	
130 ≤ kW < 450	Tier 3	STD	N/A	N/A	4.0	3.5	0.20	20	15	50	
		FEL	N/A	N/A	N/A	N/A	0.16	N/A	N/A	N/A	
		CERT			3.8	0.9	0.10	16	1	33	

BE IT FURTHER RESOLVED: That the family emission limit(s) (FEL) is an emission level declared by the manufacturer for use in any averaging, banking and trading program and in lieu of an emission standard for certification. It serves as the applicable emission standard for determining compliance of any engine within this engine family under 13 CCR Sections 2423 and 2427.

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 cancels and replaces Executive Order U-R-002-0308 dated October 5, 2005.

Executed at El Monte, California on this

30 day of March 2006.

Allen Lyons, Chief

Mobile Source Operations Division

Engine Model Summary Form ATTACHMENT PS (06)

Manufacturer: Cummins Inc.

Engine category: Nonroad CI

EPA Engine Family: 6CEXL0661AAF

Mfr Family Name: F353

Process Code: New Submission

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9.Emission Control Device Per SAE J1930	DDI,ECM,TC,CA	DDI,ECM,TC,C	DDI,ECM,TC,C	DDI,ECM,TC,C	DDI,ECM,TC,C	DDI,ECM,TC,C	DDI,ECM,TC,C	DDIECM,TC,C	DDI.ECM,TC,C	DDI.ECM,TC,C	DDI.ECM,TC,C	DDI,ECM,TC,C	DDIECM,TC,C	DDI.ECM, TC,C	DDI,ECM,TC,C	DDI.ECM,TC,C	
8.Fuel Rate: (lbs/hr)@peak torque	139.9	124.5	139.9	139,9	139.9	139.9	140.4	140,4	124.3	125.4	111.1	118.7	125.4	108.0	124.0	136.6	
7.Fuel Rate: mm/stroke@peak torque	296	264	296	296	296	296	270	277	263	266	235	251	266	229	263	276	
6.Torque @ RPM (SEA Gross)	1400@1400	1260@1400	1400@1400	1400@1400	1400@1400	1400@1400	1310@1400	1350@1400	1260@1400	1235@1400	1090@1400	1162@1400	1235@1400	1050@1400	1235@1400	1350@1400	
5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only)	146,4	129.9	147.5	147.5	147.5	139.9	138.5	142.7	130.4	130.3	111.2	9'6 1	130.3	117.0	135.5	134.6	
4.Fuel Rate: mm/stroke @ peak HP (for diesel only)	1.00	214	208	208	208	198	196	202	215	184	157	177	184	165	. 191	200	
3.BHP@RPM (SAE Gross)	400@1800	360@1800	400@2100	400@2100	400@2100	375@2100	350@2100	360@2100	340@1800	335@2100	290@2100	300@2000	335@2100	300@2100	330@2100	350@2000	
2.Engine Model	OSM44.C	OSM114.C	OSM11-C	OSM11-C	OSM11-C	OSM11-C	OSM11-C	OSM11-C	OSM11-G	OSM11-C	OSM11-C	OSM11-0	OSM11.0	OSM11-C	O-FIMSO	QSM11-C	
1.Engine Code	940E-EDPOON	8/05/EBS0006	8471 FR20001	8471 FR20003	8471 FE20004	8471 FB02999	8543 FR20017	9543 FR20018	8548 FB20023	8608 FR20042	8608:FR20043	REDR FR20096	BEAE:FROOD1	8545 FR20022	8545 FB20088	8544.FR20019	