

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)
2010	AVEXL12.9IGR	12.9	Diesel	8000
SPECIAL FEATURES & EMISSION CONTROL SYSTEMS			TYPICAL EQUIPMENT APPLICATION	
Direct Diesel Injection, Turbocharger, Charge Air Cooler, and Engine Control Module			Generator Set and other Industrial Equipment	

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):

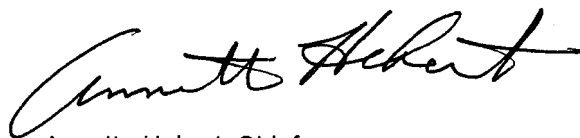
RATED POWER CLASS	EMISSION STANDARD CATEGORY		EXHAUST (g/kw-hr)					OPACITY (%)		
			HC	NOx	NMHC+NOx	CO	PM	ACCEL	LUG	PEAK
225 ≤ kW < 450	Tier 3	STD	N/A	N/A	4.0	3.5	0.20	20	15	50
		CERT	--	--	3.8	0.7	0.09	9	3	12

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 20 day of May 2010.



Annette Hebert, Chief
 Mobile Source Operations Division

Engine Model Summary Template

U-2-015-0191
Attachment 111 pg 111
4/19/2010

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
AVEXL12.9IGR	F3BE0684	F3BE0684M*E	530 @ 2100	268	NA	1596 @ 1400	320	NA	DDI, TC, CAC, ECM
AVEXL12.9IGR	F3BE0684	F3BE0684J*E	460 @ 2100	242	NA	1582 @ 1500	350	NA	DDI, TC, CAC, ECM
AVEXL12.9IGR	F3BE9687	F3BE9687A*E	503 @ 2100	250	NA	1578 @ 1400	306	NA	DDI, TC, CAC, ECM
AVEXL12.9IGR	F3BE9687	F3BE9687B*E	469 @ 2100	236	NA	1578 @ 1400	308	NA	DDI, TC, CAC, ECM
AVEXL12.9IGR	F3BE9687	F3BE9687C*E	436 @ 2100	222	NA	1578 @ 1400	310	NA	DDI, TC, CAC, ECM
AVEXL12.9IGR	F3BE9685	F3BE9685A*E	530 @ 1800	253	NA	1545 @ 1800	253	NA	DDI, TC, CAC, ECM
AVEXL12.9IGR	F3BE0684	F3BE0684S*E	530 @ 2100	274	NA	1614 @ 1400	352	NA	DDI, TC, CAC, ECM
AVEXL12.9IGR	F3BE0684	F3BE0684N*E	483 @ 2100	251	NA	1582 @ 1500	350	NA	DDI, TC, CAC, ECM
AVEXL12.9IGR	F3BE0684	F3BE0684R*E	438 @ 2000	249	NA	1614 @ 1400	352	NA	DDI, TC, CAC, ECM
AVEXL12.9IGR	F3BE0684	F3BE0684H*E	434 @ 2000	245	NA	1596 @ 1400	349	NA	DDI, TC, CAC, ECM
AVEXL12.9IGR	F3BE0684	F3BE0684Q*E	389 @ 2000	223	NA	1430 @ 1400	290	NA	DDI, TC, CAC, ECM
AVEXL12.9IGR	F3BE0684	F3BE0684G*E	384 @ 2000	221	NA	1412 @ 1400	285	NA	DDI, TC, CAC, ECM