California Environmental Protection Agency AIR RESOURCES BOARD

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) 8000	
2011	BVEXL03.2TAE	3.2	Diesel		
SPECIAL FEATURES & EMISSION CONTROL SYSTEMS		TYPICAL EQUIPMENT APPLICATION			
Mechanical Diesel Injection, Turbocharger, Smoke Puff Limiter, and Exhaust Gas Recirculation		Loader, Tractor, Dozer, and 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):

RATED POWER CLASS	EMISSION STANDARD CATEGORY	EXHAUST (g/kw-hr)			OPACITY (%)					
			нс	NOx	NMHC+NOx	co	PM	ACCEL	LUG	PEAK
56 ≤ kW < 75	Tier 3	OPTIONAL STD	N/A	N/A	4.7	5.0	0.40	20	15	50
		CERT			4.4	1.0	0.22	18	4	33

**BE IT FURTHER RESOLVED:** That for the listed engine models, the manufacturer has complied with the more stringent set of standards from the various power categories in conformance with Section 1039.230 (e) of the "California Exhaust Emission Standards and Test Procedures for 2008 and Later Tier 4 Off-Road Compression-Ignition Engines, Part I-C" adopted October 20, 2005.

**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

nnette Hebert, Chief Mobile Source Operations Division

day of December 2010.

<u>Engine Model Summary Template</u>	

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	8.Fuel Rate: 9.Emission Control (lbs/hr)@peak torqueDevice Per SAE J1930	DUBH SPL. TC. EGR.	MOT
Attachmuck w/is/zare	8.Fuel Rate: (lbs/hr)@peak torque	N/A	
refis/zero	7.Fuel Rate: mm/stroke@peak torque	88	
	6.Torque @ RPM (SEA Gross)	284 @ 1250	
	5.Fuel Rate: (lbs/hr) @ peak HP 6.Torque @ RP (for diesels only) (SEA Gross)	N/A	
	4.Fuel Rate: 5.Fuel Rate: 7.Fuel Rate: 7.Fuel Rate: 3.BHP@RPM mm/stroke @ peak HP (Ibs/hr) @ peak HP 6.Torque @ RPM mm/stroke@peak (SAE Gross) (for diesel only) (for diesels only) (SEA Gross) torque (fl	68	
	3.BHP@RPM (SAE Gross)	94 @ 2300	
,	2.Engine Model	BVEXL03.2TAE F5AE5484A*A F5AE5484A*A 94 @ 2300	
	Engine Family 1.Engine Code 2.Engine Model	F5AE5484A*A	
	Engine Family	BVEXL03.2TAE	