California Environmental Protection Agency		EXECUTIVE ORDER U-R-014-0149				
O Air Resources Board	AB VOLVO PENTA	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-14-012;

IT IS ORDERED AND RESOLVED: That the following compression-ignition engines 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)		
2016	GVPXL07.7CJA	7.7	Diesel	8000		
	FEATURES & EMISSION		TYPICAL EQUIPMENT			
Charg Smoke	ctronic Direct Injection, ge Air Cooler, Electronic Puff Limiter, Exhaust G Selective Catalytic Redu	Control Module, as Recirculation,	Crane, Loaders, Pump, Compressor			

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			EX	HAUST (g/kW-h		OPACITY (%)			
	STANDARD CATEGORY		NMHC	NOx	NMHC+NOx	со	PM	ACCEL	LUG	PEAK
130 ≤ kW ≤ 560	Tier 4 Final	STD	0.19	0.40	N/A	3.5	0.02	N/A	N/A	N/A
		CERT	0.01	0.19	-	0.1	0.02	-	-	-

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

day of November 2015.

Annette Hebert, Chief Emissions Compliance, Automotive Regulations and Science Division

Engine Model Summary Template

Attachment (af

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Engine Family	1.Engine Code	2.Engine Model	3.BHP@RPM (SAE Gross) mm	4.Fuel Rate: n/stroke @ peak HP (for diesel only)	5.Fuel Rate: (lbs/hr) @ peak (for diesels only		7.Fuel Rate: mm/stroke@peak torque	(lbs/h	iel Rate: ir)@peak orque	9.Emission Control Device Per SAE J1930	
GVPXL07.7CJA	I	TAD870 VE	214@2200	105	78	1060Nm@1200	143	58	DDI,EM,	ECM, CAC, TC, SPL, S	CR-U,EGR
GVPXL07.7CJA	11	TAD871 VE	248@2200	120	89	1160Nm@1200	156	63	DDI,EM,	ECM, CAC, TC, SPL, S	CR-U,EGR
GVPXL07.7CJA	111	TAD872 VE	281@2200	136	101	1237Nm@1350	165	75	DDI,EM,	ECM, CAC, TC, SPL, S	SCR-U,EGR
GVPXL07.7CJA	IV	TAD873 VE	315@2200	152	113	1310Nm@1450	178	87	DDI,EM,	ECM, CAC, TC, SPL, S	SCR-U,EGR