

AB VOLVO PENTA

EXECUTIVE ORDER U-R-014-0176 New Off-Road Compression-Ignition Engines

Pursuant to the authority vested in California 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-19-095;

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)		
2020	LVPXL16.1CDC	16.1	Diesel	8000		
SPECIAL	FEATURES & EMISSION	CONTROL SYSTEMS	TYPICAL EQUIPMENT APPLICATION			
	c Direct Injection, Electro Charge Air Cooler, Turb ff Limiter, Selective Cata Ammonia Oxidation (ocharger, livtic Reduction-Urea.	Generator Set			

The engine models and codes are attached.

The following are the exhaust certification standards (STD) and certification levels (CERT) for non-methane hydrocarbon (NMHC), 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):

	EMISSION		EXHAUST (g/kW-hr)					OPACITY (%)		
RATED POWER CLASS	STANDARD CATEGORY		NMHC NO	NOx	Ox NMHC+NOx	со	PM	ACCEL	LUG	PEAK
560kW < GEN ≤ 900kW	Tier 4 Final	STD	0.19	0.67	N/A	3.5	0.03	N/A	N/A	N/A
		CERT	0.003	0.33	-	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 2019.

Allen Lyons, Chief

Emissions Certification and Compliance Division

ATTACHMENT 1 OF 1 EO # U-R-014-0176 Date 10/25/2019

Engine Model Summary Template

Engine Family	1.Engine Code	2.Engine Model	3.BHP@RPM (SAE Gross)	4.Fuel Rate: m/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 Ra (lbs/hr)@p torque	eak 9.Emission Control
LVPXL16.1CDC	1	TWD1673 GE	919@1800	505	305	3634Nm@1800	505	305	DDI,EM, ECM,CAC, TC, SPL, SCR-U, AMOX
LVPXL16.1CDC	- 11	TWD1672 GE	825@1800	447	270	3264Nm@1800	447	270	DDI,EM, ECM,CAC, TC, SPL, SCR-U, AMOX