

VOLVO GROUP TRUCKS TECHNOLOGY, POWERTRAIN ENGINEERING, A DIVISION OF MACK TRUCKS, INC.

EXECUTIVE ORDER A-242-0203-1 New On-Road Heavy-Duty Motor Vehicles

Pursuant to the authority vested in California Air Resources Board by Health and Safety Code Divisions 25.5 and 26, Part 5, Chapter 2; and pursuant to the authority vested in the undersigned by Health and Safety Code Sections 39515 and 39516 and Executive Order G-19-095;

IT IS ORDERED AND RESOLVED: The following on-road motor vehicles with a manufacturer's GVWR over 10,000 pounds are certified as described below. Production vehicles shall be in all material respects the same as those for which certification is granted.

VEHICLE FAMILY INFORMATION:

Model Year: 2023

Vehicle Family Name: PVPT2VOCVG00

Vehicle Type: Vocational

Vehicle Service Class: Heavy HDV

Vehicle Subcategory: Heavy HDV / Diesel / Regional

Gross Vehicle Weight Rating (GVWR) of Vehicles (pounds): GVWR > 19,500

CO₂ FAMILY EMISSION LIMITS:

CO₂ Standard (g/ton-mile): 205

Highest Projected Family Emission Limit (g/ton-mile): **234** Lowest Projected Family Emission Limit (g/ton-mile): 0

EMISSION CONTROL SYSTEMS:

Low rolling resistance tires all (LRRA), Low rolling resistance tires (drive) (LRRD), Low rolling resistance tires (steer) (LRRS), Tire pressure monitoring system (TPMS), Other Advanced Technology Components (ADVO), Weight reduction (WR), Engine shutoff - 5 min or less idling (IRT5)

BE IT FURTHER RESOLVED: The manufacturer has demonstrated certification compliance with the Greenhouse Gas Emission Standards as specified in Title 17 CCR 95663 and the incorporated "California Greenhouse Gas Exhaust Emission Standards and Test Procedures for 2014 and Subsequent Model Heavy-Duty Vehicles" (HDV Test Procedures) adopted October 21, 2014 as last amended September 9, 2021.

BE IT FURTHER RESOLVED: For the listed air conditioning platform(s) in the attachment, the manufacturer has demonstrated certification compliance with the AC Leakage Standard specified in 17 CCR 95663(a)(1)(B)7 and Section 1037.115 of the incorporated "California Greenhouse Gas Exhaust Emission Standards and Test Procedures for 2014 and Subsequent Model Heavy-Duty Vehicles" (HDV Test Procedures) adopted October 21, 2014, as last amended September 9, 2021.

BE IT FURTHER RESOLVED: For the listed vehicle models, the manufacturer has submitted the materials to demonstrate certification compliance with 13 CCR 1965 (emission control labels), 13 CCR 1978 (complete vehicles) (vehicle refueling emissions standards), and 13 CCR 2035 et seq. (emission control warranty).

BE IT FURTHER RESOLVED: The engine families that are approved for installation within the vehicle family are listed in the attachment.

Vehicles certified under this Executive Order must conform to all applicable California emission regulations.

This Executive Order hereby supersedes Executive Order A-242-0203 dated November 15, 2022.

Executed on this /2t/day of December 2023.

Robin U. Lang, Chief

Emissions Certification and Compliance Division

Attachment 1 of 1:

Vehicle Family: <u>PVPT2VOCVG00</u> Date: <u>12/7/2023</u> EO: <u>A-242-0203-1</u>

Vehicle Make and Models:

<u>Vehicle Make</u> <u>Models</u>

Volvo VNRe (Heavy-Duty All Electric Vehicle)
Volvo VHD (AF, AB), VAH (AF, AB), VN (R, L),

Mack Granite (AF, AB), LR, Terrapro MR, Pinnacle PI (AF), Anthem AN (AB)

Engine Families in Vehicle Family:

PVPTH10.8CA1 PCEXH0540LDC PVPTH12.8CA1 PCEXH0912XCB PCEXH0912XCA PCEXH0912XCC

A/C Platform Summary:

A/C Platform ID	Refrigerant Type	Refrigerant	STD (HFC (g/year))	Leakage Rate (HFC
		Capacity (g)		(g/year))
VHD: Day Cab 11L	R134a	1510	22.7	10.1
VNR: L4H4 13L	R134a	1810	27.2	11.3
GU: Day Cab 9L	R134a	1590	23.9	10.7