	CALIFORNIA AIR RESOURCES BOARD	VOLVO GROUP TRUCKS TECHNOLOGY, POWERTRAIN ENGINEERING, A DIVISION OF MACK TRUCKS, INC.	EXECUTIVE ORDER A-242-0200 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 26,000 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: PVPT2TRACN00 Vehicle Type: Tractor Vehicle Subcategory: Heavy-Haul Tractor

CO2 FAMILY EMISSION LIMITS:

CO₂ Standard (g/ton-mile): 52.4 Highest Projected Family Emission Limit (g/ton-mile): 64.0 Lowest Projected Family Emission Limit (g/ton-mile): 42.6

EMISSION CONTROL SYSTEMS:

Low rolling resistance tires all (LRRA), Low rolling resistance tires (drive) (LRRD), Low rolling resistance tires (steer) (LRRS), Aerodynamic roof fairing (ARF), Aerodynamic side skirt and/or fuel tank fairing (ATS), Weight reduction (WR), Vehicle speed limiter (VSL), Tire pressure monitoring system (TPMS), Gap reducing tractor fairing (TGR), Engine shutoff - 5 min or less idling (IRT5)

BE IT FURTHER RESOLVED: The listed vehicle family is certified to the CO₂ Emission Standards for Heavy-Haul Tractors as specified in Section 1037.106 or to the Optional CO₂ Emission Standards for Tractors at or above 120,000 pounds GCWR specified in Section 1037.670 of the "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: 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: No approved air conditioning platform(s) are listed in the attachment as the manufacturer has not 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.

Executed on this 9th day of November 2022.

Elin U. Lang

Robin U. Lang, Chief Emissions Certification and Compliance Division

Attachment 1 of 1:

Vehicle Family: <u>PVPT2TRACN00</u>

Date: <u>11/3/2022</u>

EO: <u>A-242-0200</u>

<u>Vehicle Make and Models:</u> <u>Vehicle Make</u> Volvo Mack	<u>Models</u> VNL, VNR Pinnacle PI (CHU),	Anthem AN (CXU)		
Engine Families in Vehicle Family: PVPTH10.8CA1 PVPTH12.8CA1 PVPTH12.8CA2	PCEXH0912XCB PCEXH0729XDA			
<u>A/C Platform Summary:</u> <u>A/C Platform ID</u>	<u>Refrigerant Type</u>	<u>Refrigerant</u> Capacity (g)	<u>STD (HFC (g/year))</u>	<u>Leakage Rate (HFC (g/year))</u>

No Air Conditioning platforms were reviewed and approved for this vehicle family by CARB. Installing a non CARB approved Air Conditioning system on the vehicle would cause the vehicle to be in a non-certified configuration.