| CALIFORNIA AIR RESOURCES BOARD VOLVO GROUP TRUCKS TECHNOLOGY, POWERTRAIN ENGINEERING, A DIVISION OF MACK TRUCKS, INC. | EXECUTIVE ORDER A-242-0187-1 New On-Road Heavy-Duty Motor Vehicles |
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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: 2022 Vehicle Family Name: NVPT2VOCVK00 Vehicle Type: Vocational Tractor Vehicle Service Class: Heavy HDV Vehicle Subcategory: Heavy HDV / Diesel / Regional Gross Vehicle Weight Rating (GVWR) of Vehicles (pounds): GVWR > 33,000

CO2 FAMILY EMISSION LIMITS:

CO₂ Standard (g/ton-mile): 205 Highest Projected Family Emission Limit (g/ton-mile): 291 Lowest Projected Family Emission Limit (g/ton-mile): 174

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), 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-242-0187 dated December 29, 2021.

Executed on this <u>//t/</u>day of August 2022

Tolin U. Danc Robin U. Lang, Chief Emissions Certification and Compliance Division

 Attachment 1 of 1:
 Vehicle Family: <u>NVPT2VOCVK00</u>
 Date: <u>08/01/2022</u>
 EO: <u>A-242-0187-1</u>

| <u>Vehicle Make and Models:</u> <u>Vehicle Make</u> Mack Volvo | <u>Models</u> Granite (AF, AB), TerraPro (LR, MR), Anthem AN (AB), Pinnacle PI (AF) VHD (AF, AB), VAH (AF, AB), VN (R, L) |
|---|---|
| <u>Engine Families in Vehicle Family:</u> NVPTH10.8CA1 NCEXH0540LDC | NVPTH12.8CA1 |
| A/C Platform Summary: | |

| A/C Platform ID | Refrigerant Type | Refrigerant | <u>STD (HFC (g/year))</u> | Leakage Rate (HFC |
|--------------------------|------------------|---------------------|---------------------------|-------------------|
| | | <u>Capacity (g)</u> | | <u>(g/year))</u> |
| VNL: Day Cab Cummins 12L | R134a | 1510 | 22.7 | 10.1 |