

VOLVO POWERTRAIN NORTH AMERICA A DIVISION OF MACK TRUCKS, INC.

EXECUTIVE ORDER A-242-0164-2 New On-Road Heavy-Duty Motor Vehicles Page 1 of 1

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.

MODEL	VEHICLE	VEHICLE	VEHICLE	SUBCATEGORY	VEHICLE MAKE & MODELS
YEAR	FAMILY NAME	TYPE	SERVICE CLASS	(Vehicle Size / Engine Cycle / Duty Cycle)	
2021	MVPT2VOCVH00	Vocational	Heavy HDV	Heavy HDV/Diesel/Urban	Mack: Granite (AF, AB), LR, Terrapro MR, Anthem AN (AB), Pinnacle PI (AF) Volvo: VHD (AF, AB), VAH (AF, AB), VN (R,L) Mack: LRe-(Heavy-Duty All Electric Vehicle)

EMISSION CONTROL SYSTEMS

ADVO, LRRA, LRRD, LRRS, TPMS

*=not applicable; VSL = Vehicle speed limiter; VSLS = "Soft-top" vehicle speed limiter; VSLE = Expiring vehicle speed limiter; VSLD = Vehicle speed limiter with both "soft-top" and expiration; IRT5 = Engine shutoff after 5 minutes or less of idling; IRTE = Expiring engine shutoff; LRRA = Low rolling resistance tires (all); LRRD = Low rolling resistance tires (drive); LRRS = Low rolling resistance tires (steer); ATS = Aerodynamic side skirt and/or fuel tank fairing; ARF = Aerodynamic rof fairing; ARFR = Adjustable height aerodynamic roof fairing; TGR = Gap reducing tractor fairing (tractor to trailer gap); ADVH = Vehicle includes advanced hybrid technology components; ADVO = Vehicle includes other advanced-technology components (i.e., non-hybrid system); INV = Vehicle includes innovative (off-cycle) technology components; ATI = Automatic tire inflation system; TPMS = Tire pressure monitoring system; WR = Weight Reduction

Shown below are the CO₂ Greenhouse Gas Exhaust Emission Standard (STD) in g/ton-mile and/or the CO₂ Family Emission Limit(s) (FEL) of the listed vehicle family in g/ton-mile as applicable under 17 CCR 95663:

GVWR (pounds)	STD [CO₂ (in g/ton-mile)]	Highest Projected FEL [CO ₂ (in g/ton-mile)]	Lowest Projected FEL [CO ₂ (in g/ton-mile)]
GVWR > 33,000	308	375	0

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 June 27, 2019.

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 June 27, 2019.

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), and 13 CCR 2035 et seq. (emission control warranty).

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

This Executive Order hereby supersedes Executive Order A-242-0164-1 dated February 19, 2021.

Executed on this 9th day of September 2021.

Allen Lyons, Chief

Emissions Certification and Compliance Division

A/C PLATFORM SUMMARY TABLE

Vehicle family	Date	EO	
MVPT2VOCVH00	8/12/2021	A-242-0164-2	

A/C Platform ID	Refrigerant Type	Refrigerant	STD	Leakage Rate
		Capacity (g)	(HFC (g/year))	(HFC (g/year))
VHD: Day Cab 11L	R134a	1510	22.7	10.1
VNR: Day Cab 13L	R134a	1510	22.7	10.1
CXU: 70" Sleeper 11L	R134a	1820	27.3	12.1
MACK LRE	R134a	1575	23.6	13.2