

Heavy - Duty Greenhouse Gas Certification Overview

EMA Compliance Meeting

April 2020

New Vehicle and Engines Program Branch
Emissions Certification and Compliance Division



OUTLINE

- ❑ Introduction to the HD GHG Section
- ❑ Certification Categories
- ❑ HD GHG Phase I vs. Phase 2
- ❑ Trailers and Aero Devices
- ❑ Zero Emission Powertrains (ZEP) and enhanced electric and fuel cell vehicles.
- ❑ What are we working on?

HD GHG CERTIFICATION SECTION

- CARB created the new Section within the New Vehicles and Engines Program Branch (NVEPB) in the Emissions Certification and Compliance Division (ECCD).
- The Section will handle new certification applications for Phase 2 GHG vehicles (vocational vehicles and tractors), trailers, aero devices and ZEP.
- This section currently has a manager and two staff. Three new staff will be hired by the end of May.
- Current staff
 - HD GHG Manager: Lucky Benedict
 - Tsatsu Nukunya, Air Resources Engineer (ARE)
 - Mohammad Mollaei, ARE

WHAT DO WE CERTIFY?

- ❖ **Tractors and Vocational Vehicles**

 - GHG Phase I – 2014 – 2020 MY

 - GHG Phase 2 – 2021 MY+

- ❖ **Trailers**

 - 2020 MY+ (Voluntary up to 2022 MY)

- ❖ **Aero Devices**

 - 2020 MY+

- ❖ **Zero Emissions Powertrains(ZEP) and Enhanced Fuel Cell and Electric Vehicles**

 - 21 MY+ (Voluntary, alternate pathway to Phase 2 GHG)

- ❖ **HD GHG Engines**

 - Certified by the Compression Ignition and Heavy-Duty Certification Section

KEY CHANGES - HD GHG PHASE 1 vs. PHASE 2

Added/revised requirements

GHG PHASE 1	GHG PHASE 2
Manufacturers certified with EPA may use the deemed to comply provision for California	CARB does an independent review prior to Executive Order (EO) issuance
Trailers are not included	Trailers included
Small business manufacturers are exempt.	Regulations apply to small business manufacturers starting in 2022 MY
AC leakage standards apply to tractors.	AC leakage standards apply to tractors and vocational vehicles
Subcategories based on combustion cycle and GVWR	Subcategories based on combustion cycle, GVWR and duty cycle

TRAILERS & AERODYNAMIC DEVICES

❑ The HD GHG Section is in the process of taking over trailer and Aero Device Certification from CARB's Mobile Source Control Division (MSCD)

❑ Executive Orders issued as of April 15, 2020

Trailers: 12 EOs have been issued to three manufacturers (Hyundai Translead, ST Engineering Hackney, West Mark)

Aero devices: 50 Aero devices or device combinations EOs have been issued to 12 manufacturers (Ecoflaps, Ridge Corp, Stemco, Strehl, Transtex, Utility Trailer Manufacturing Inc., Wabco, Aero Industries, Michelin, Wabash, Hyundai Translead and Rocketail)

❑ CARB is not enforcing the trailer standards of the CA Phase 2 GHG regulations for MY 2020 and MY 2021 trailers manufactured before January 1, 2022 , as per CARB Advisory # 295 at <https://ww3.arb.ca.gov/enf/advs/adv295.pdf>. However, CARB but will continue to certify trailers to the CA Phase 2 standards on a voluntary basis.

ZERO EMISSIONS POWERTRAIN

- ❑ ZEP Certification is available starting 2021MY as a voluntary and optional process.
- ❑ ZEP will be required in future MYs for certain CARB programs such as Advanced Clean Truck (ACT) and Zero Emissions Airport Shuttle.
- ❑ Heavy Duty Fuel Cell and battery electric vehicle and powertrain manufacturers have a few potential paths:
 - ❖ Certify the Zero Emissions Powertrain using the ZEP path and obtain an EO for the powertrain.
 - ❖ Certify as an Enhanced Fuel Cell and Electric Vehicle. This process requires a certified ZEP and an additional EO for the vehicle.
 - ❖ Use the standard Phase 2 GHG pathway (i.e. without going through ZEP certification)

WHAT ARE WE WORKING ON?

- ❑ Manufacturers Advisory Correspondence (MAC) - Certification Guidance for California Phase 2 Greenhouse Gas Regulations for Medium- and Heavy-Duty Engines, Vehicles and Trailers- Summer 2020

- ❑ Application Templates for:
 1. GHG Phase 2 Vehicle Certification – June 2020
 2. ZEP/ Enhanced Battery and Fuel Cell Electric Certification – June 2020

- ❑ Certification Workshop- TBD

DISCUSSION

QUESTIONS?