

Heavy-Duty Inspection and Maintenance (HD I/M) Regulation: Background and Program Requirements Starting in 2023



October 31, 2022

This Fact Sheet presents background information on the HD I/M regulation applicable to heavy-duty vehicles operating in California and describes requirements starting in 2023. A separate Fact Sheet describes future requirements starting in the 2024 timeframe for the incorporation of periodic compliance testing into the program.

BACKGROUND AND APPLICABILITY

What is the HD I/M regulation?

The HD I/M regulation is a new program starting in January 2023 to ensure polluting, poorly maintained heavy-duty vehicles operating in California are quickly identified and repaired. Passenger vehicles and lighter trucks have been required to undergo periodic emissions testing and reporting for decades through the Bureau of Automotive Repair's Smog Check Program. Now big trucks and other heavy-duty vehicles traveling California's roadways will be subject to similar requirements starting with roadside emissions screening to identify potential high emitters for follow-up testing and emissions-related repairs, if needed. At full implementation, the HD I/M regulation will require heavy-duty vehicles to undergo periodic emissions testing to reduce particulate matter (PM) and oxides of nitrogen (NOx) emissions, and to protect communities most impacted by air pollution.

Why is HD I/M needed in California?

The majority of densely populated areas in California, such as the South Coast and San Joaquin Valley air basins, exceed federal ozone and PM_{2.5} standards. Many major populated regions and economically disadvantaged communities are situated near heavy trucking traffic areas. The HD I/M program is critical for achieving State Implementation Plan commitments and moving closer to meeting federal ambient air quality standards and improving public health in these regions, across the State, and especially in disadvantaged communities disproportionately impacted by air pollution.

How does the HD I/M regulation improve public health?

Heavy-duty vehicles' PM and NOx emissions impose a damaging effect on human health and the environment. Diesel PM is a carcinogenic toxic air contaminant. NOx is a precursor of ozone formation and several other air toxic contaminants, including PM.

Exposure to PM and ozone can lead to serious adverse health effects such as asthma, cardiopulmonary and respiratory disease, and premature death.

The HD I/M regulation will reduce NO_x and PM emissions responsible for these adverse health effects, especially in areas disproportionately impacted by truck emissions. It is expected to be one of the most impactful California Air Resources Board (CARB) programs approved in decades. In 2024, it is projected to reduce NO_x emissions by 8.6 tons per day, and PM_{2.5} emissions by 0.09 tons per day in the San Joaquin Valley. In 2037, the regulation is projected to cut statewide NO_x emissions by 81.3 tons per day and PM emissions by 0.7 tons per day. These reductions will result in roughly 7,500 avoided premature deaths and 6,000 avoided hospitalizations statewide. When the regulation's health benefits are monetized, they are valued at nearly \$76 billion.

Which heavy-duty vehicles must comply with the regulation?

Nearly all diesel and alternative fuel heavy-duty trucks and buses with a gross vehicle weight rating over 14,000 pounds that operate in California must comply. This includes hybrid trucks and buses, commercial vehicles, privately-owned vehicles, government vehicles, and vehicles registered outside of California.

Which vehicles are exempt from the regulation?

The heavy-duty vehicle types shown below are exempt from the regulation:

- Zero-emission vehicles
- Military tactical vehicles
- Emergency vehicles
- New vehicles with engines certified to the most stringent optional, NO_x standard (only for the first four years of program implementation)
- Motorhomes registered outside of California
- Vehicles operating under an experimental permit
- Historical vehicles

Are government vehicles subject to the HD I/M regulation?

Yes, local, state, and government vehicles are subject to the HD I/M regulation.

Are single vehicles (one truck fleets) exempt from HD I/M like they are in the Periodic Smoke Inspection Program (PSIP)?

No. Single vehicles are also subject to the HD I/M regulation, unless they are a vehicle type specifically exempted from the regulation (see exemptions above).

When does the HD I/M program start?

The program begins in January 2023 with the use of roadside emissions monitoring devices (REMD) to screen for vehicles that may have high emissions. Vehicles flagged as potential high emitters may be required to undergo follow-up vehicle compliance testing to ensure they are operating with properly functioning emissions control systems.

PROGRAM REQUIREMENTS STARTING IN JANUARY 2023

What are my responsibilities as a vehicle owner when the HD I/M regulation starts in January 2023?

First, keep your vehicles well-maintained and perform regularly scheduled preventive maintenance. If your vehicle is identified as a potential high emitter through REMD, you will receive a Notice to Submit to Testing (NST) from CARB. Upon receipt, you will have 30 calendar days to submit to CARB a passing HD I/M compliance test performed by a HD I/M tester. Be sure to follow the instructions in the letter you receive from CARB and don't wait until the last day to get your vehicle tested and submit test results to CARB. Once CARB determines your vehicle is compliant, there is nothing more you will need to do in response to the NST.

If I receive an NST, what type of testing will my vehicle need?

The type of HD I/M compliance test your vehicle will undergo depends on whether your vehicle is equipped with on board diagnostics (OBD) or not.

OBD equipped vehicles are required to undergo a scan of the engine's OBD data using a CARB-validated OBD test device. Diesel vehicles and diesel hybrids with 2013 and newer model year engines have OBD systems. For alternative fuel vehicles, 2018 and newer model year engines have OBD systems.

Non-OBD vehicles, i.e., those that don't meet the engine model year requirements above, are required to undergo a smoke opacity test and a visual inspection of the vehicle's emissions control equipment, referred to as the Vehicle Emissions Control Equipment Inspection. The smoke opacity test is the same SAE J1667 snap acceleration smoke inspection used to comply with CARB's PSIP.

Do I still need to perform my annual smoke inspections for compliance with PSIP?

If you own vehicles that are currently subject to PSIP, you still must perform your annual compliance inspections. If your vehicle is required to undergo HD I/M compliance

testing as a result of an NST, you may apply your passing HD I/M compliance test to meet the vehicle's annual PSIP testing requirement.

Who can perform HD I/M compliance testing on my vehicles?

Compliance testing must be performed by a HD I/M tester who has completed CARB's free, online HD I/M Tester Training Course and passed the accompanying exam. CARB will publish a list of HD I/M testers with contact information that offer for-hire testing services, which may include mobile services, on CARB's HD I/M webpage at: <https://ww2.arb.ca.gov/our-work/programs/heavy-duty-inspection-and-maintenance-program>.

This list will be first available near the end of 2022 and will be updated periodically. Inclusion on the list is not an endorsement by CARB but merely a courtesy for HD I/M testers and vehicle owners that may need their services.

For more information on HD I/M Testers, please refer to the HD I/M Tester Training and Examination Fact Sheet.

FUTURE 2023 PROGRAM REQUIREMENTS

Are there other vehicle owner requirements that start in 2023?

Yes. Starting in mid-2023, vehicle owners will be required to create owner accounts in CARB's HD I/M database, verify the vehicles in their fleets, and pay the first annual compliance fee for each vehicle. The HD I/M database will incorporate vehicle data from existing CARB databases and from DMV data. Many vehicle owners only will need to check that the vehicle data is correct, while others may need to input the data manually.

How will I know when I need to create my owner account, check my vehicle data, and pay my initial compliance fees?

CARB is required to provide at least 90 calendar days advance notice on the California Regulatory Notice Register and on CARB's website before the requirements take effect and are enforced. CARB will also notify vehicle owners through outreach activities such as training sessions, targeted email campaigns, and program announcements delivered straight to your email inbox when you subscribe to receive HD I/M program updates. We strongly recommend you subscribe to receive these updates at:

<https://public.govdelivery.com/accounts/CARB/subscriber/new?topid=hdim>.

Will CARB provide training to vehicle owners on how to use the HD I/M database?

Yes, CARB will provide training sessions to educate people on how to use the HD I/M database for establishing accounts, checking and inputting vehicle information, and paying compliance fees before these requirements are enforced. The trainings may be live, by webinar, and/or through recorded and written tutorials. To stay informed, subscribe at:

<https://public.govdelivery.com/accounts/CARB/subscriber/new?topid=hdim>.

What if I add or remove a vehicle from my fleet after I've established my owner account?

Vehicle owners are responsible for maintaining accurate account information and must update vehicle information within 30 calendar days of a transaction to add or remove a vehicle.

What happens if I don't create an owner account and pay my initial compliance fees?

When these requirements kick-in in mid-2023, vehicle owners will be provided a period of time to create their accounts, check vehicle data, and pay compliance fees before the requirements are enforced. Once enforcement begins, vehicle owners that don't comply with these requirements may be cited for non-compliance and/or have their DMV vehicle registrations blocked.

Are there other HD I/M requirements that will start in 2023?

Yes. Upon enforcement of the requirements to establish owner accounts with vehicle information as described above, freight contractors and brokers must verify that heavy-duty vehicles they contract with for services are in compliance with the HD I/M regulation. This also includes public agencies that contract for heavy-duty truck services. Furthermore, seaport and railyard facilities must also verify compliance with the HD I/M regulation for vehicles that enter their facilities.

HOW TO GET MORE INFORMATION ON THE HD I/M REGULATION

How can I receive updates on HD I/M program activities?

To receive automatic email updates on HD I/M program implementation and other activities, sign up on the GovDelivery list at [California Air Resources Board \(govdelivery.com\)](https://public.govdelivery.com/accounts/CARB/subscriber/new?topid=hdim).

Where do I get additional HD I/M program information?

For more information, go to:

<https://ww2.arb.ca.gov/sites/default/files/truckstop/hdim/hdim.html> or
<https://ww2.arb.ca.gov/our-work/programs/heavy-duty-inspection-and-maintenance-program>.

You may also view CARB's training modules developed for the HD I/M Tester Training Course at: <https://ww2.arb.ca.gov/sites/default/files/truckstop/azregs/training.html>. Scroll to the Helpful Videos section to view them. These modules provide more in-depth information on the requirements of the HD I/M regulation and testing procedures that may be helpful to vehicle owners.

Where can I find the text of the final HD I/M regulation?

The HD I/M regulation, referred to as the final regulation order, is in title 13, California Code of Regulations, sections 2195 - 2199.1 and is available here:

<https://ww2.arb.ca.gov/sites/default/files/barcu/regact/2021/hdim2021/hdi-mfroatta-1.pdf>.

If I have additional questions, how do I contact CARB?

Please email staff at hdim@arb.ca.gov. We generally respond within three to five business days.