

A blue and white semi-truck is driving on a highway next to a rocky cliffside. The truck is in the foreground, and two other white semi-trucks are visible further down the road. The sky is clear and blue.

Getting your fleet CARB-compliant

What is CARB compliance and
how does it affect your fleet?

Introduction



According to the [United States Environmental Protection Agency](#) (EPA), the transportation industry is one of the largest contributors of greenhouse gas (GHG) emissions in the United States, making up 29% of emissions compared to other industries.

Naturally, this creates a need within the transportation industry to focus on reducing these emissions and creating a more habitable environment in the places they operate. Understandably, the United States as a whole has started moving towards lowering their collective emissions with the rise in popularity of electric vehicles – approximately [1.6 million EVs were sold in the U.S. in 2023](#), signifying a 60% increase from the 1 million sold in 2022.

When it comes to heavy-duty transportation vehicles, it can be harder to operate solely on battery power. With the long distances and hours traveled, [range anxiety](#) is a very present challenge for transportation fleets. There also aren't as many electric heavy-duty options on the market compared to diesel-powered trucks. Considering EV trucks are still relatively new, it can be daunting to add them to a well-established transportation fleet. However, this hasn't stopped the [growth of electric truck sales](#) in the United States over the past few years, inching up by 0.7% between 2021 and 2022.

Some government agencies, like the EPA, have introduced legislation surrounding the operation of heavy-duty trucks in order to reduce the amount of GHG these vehicles are releasing into the air. These ordinances usually address effective truck maintenance, being more fuel efficient, and monitoring and reporting on emissions. Although the EPA has enforced federal regulations on emissions, states may have their own regulations in addition to those set out by the EPA.

California in particular has some of the most stringent and progressive regulations surrounding GHG emissions. Fleets traveling through or within California need to be well-versed and compliant with all of their particular regulations, or they risk being fined or penalized.



With this comes a big question – how do fleets make sure they are prepared to work in California?

Well, we're glad you asked! In this ebook, we'll tell you everything you need to know about how to remain compliant while working in the state of California, including how to get your fleet ready for the Clean Truck Check program.

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CHAPTER 01

What is CARB?

The [California Air Resources Board](#), shortened simply to CARB, is an agency of the government of California that is tasked with “protecting the public from the harmful effects of air pollution and developing programs and actions to fight climate change.”

Its main focus is reducing air pollution – intending to provide a cleaner, safer environment for its citizens – but in doing so, it also:



Leads California’s efforts to reduce climate-changing emissions in order to keep the state’s air quality standards at levels that protect those at greatest risk.



Promotes further research when it comes to air pollution – including identifying pollutants, studying the causes and effects of air pollution and potential solutions, and noting the costs and benefits of pollution control.



Verifies automakers’ and fleets’ emissions compliance to ensure that, while they are operating in California, they are also doing their part to keep the state’s air clean.

Although there are many contributing factors to air pollution, the transportation industry continues to be the single greatest source of smog-forming emissions in the state and a top contributor of climate-changing gases. In order to reduce the pollution from transportation vehicles, CARB has introduced multiple mandates that help ensure vehicles on the road in California are clean and well-maintained, lowering these associated emissions.

It’s wise for fleets doing business in California to familiarize themselves with these governances so that they stay compliant and avoid fines. Read on to find out everything you need to know about how to operate your fleet in compliance with CARB!



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CARB regulations for truck fleets



It's important for fleets to keep up-to-date with the [Clean Truck Check](#), formerly the Periodic Smoke Inspection Program and [Heavy-Duty Inspection and Maintenance Regulation](#) (HD I/M). CARB has been releasing intermittent updates to these programs that fleets must comply with over the next couple of years. As with the previous regulations, heavy-duty trucks are required to monitor and report on their emissions based on the parameters laid out in the Clean Truck Check.

There are multiple ways to measure emissions in heavy-duty vehicles, including using a telematics device, known as an [Electronic Logging Device](#) (ELD), attached to the vehicle using a T-harness – or using the OBD system. The OBD system monitors every component that affects emissions to ensure that the vehicle remains as clean as possible while in operation. The OBD system shows a warning light on the vehicle instrumental panel to alert the driver if there is a problem with an emissions-related component.

As part of its regulations, CARB prohibits any changes to the CARB-approved OEM emissions controls system of a vehicle, which includes relocating or replacing the manufacturer's on-board diagnostic (OBD) port. However, [Geotab is the first and only solution to receive an Executive Order](#) allowing the most secure installation of a continuously connected telematics product using an aftermarket T-harness in California, having collaborated closely with CARB to ensure its telematics solutions meet CARB's strict compliance standards.



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What is the CARB Clean Truck Check program?

CARB's [Clean Truck Check](#) is a program for heavy-duty, non-gasoline vehicles with a gross vehicle weight rating (GVWR) of over 14,000 pounds that aims to promote emission reduction within the transportation industry. Part of its mandate requires that fleet owners test their emissions on a regular basis and submit their results to CARB – that way, they can work to improve and repair malfunctioning systems.

There are four methods for fleets to submit their emissions-related data to remain in compliance:



Use of a certified testing facility:

These facilities are operated by CARB employees and require fleets to send their vehicles in for regular testing.



Utilize a Portable Emission Acquisition System (PEAQs):

These systems are usually roadside and collect a snapshot of emissions data from your fleet vehicle.



Utilize in-house Periodic Smoke Inspection Program (PSIP) with Non-Continuously-Connected OBD Scan Tools: This requires an employee in-house to manually collect emissions data from your fleet vehicles.



Employ a telematics device to transmit data continuously: By utilizing a telematics device, fleets can collect emissions data continuously without inhibiting vehicle uptime.

The Clean Truck Check applies to buses, trucks, agricultural equipment and motorhomes – and although heavy-duty vehicles only make up [3% of the vehicles on the state's roads](#), CARB says they are responsible for over half of the smog-causing pollution and fine particulate matter from California's vehicles. By creating strict regulations for heavy-duty vehicles, CARB can help make a dent in these emissions and address the quality of the state's air for its residents.

CARB estimates that the new program will prevent 7,500 air-quality related deaths as well as 6,000 hospitalizations and emergency room visits from 2023 to 2050. It should also deliver \$75 billion in health benefits – that's over 18 times the estimated \$4 billion cost of the program. The Clean Truck Check also offers fleets a more modernized approach than similar programs, allowing vehicles to take advantage of [on-board diagnostics](#) (OBD) to help with emissions reporting. OBD systems will allow authorized testers with certified devices, such as Geotab, to collect emissions data rather than requiring fleets to travel to a testing facility.



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Timeline of the Clean Truck Check program

CARB has outlined a distinct timeline for the Clean Truck Check program, broken down into three separate phases. This gives heavy-duty fleets time to implement and budget for the program.

Phase 1

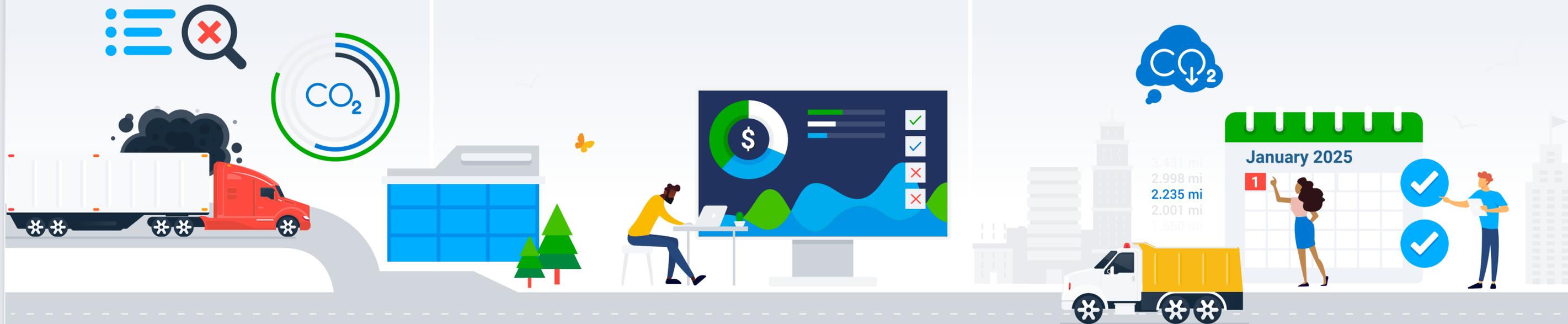
The first phase of the Clean Truck Check began in January 2023 and focused on establishing roadside monitoring stations to screen heavy-duty vehicles. The aim was to identify high emitters, who were then required to either verify the functionality of their emissions equipment or make repairs to their vehicles if necessary.

Phase 2

Phase two started with a three-month open reporting season, which was implemented from October 1, 2023 to December 31, 2023. Initially, by December 31, 2023, vehicle owners had to register their vehicles in the Clean Truck Check database and pay a \$30 per-vehicle annual compliance fee for 2023. CARB has since [extended the Clean Truck Check reporting deadline](#) to December 31, 2024 to give fleets additional time to complete their initial vehicle reporting and meet the compliance fee requirement for 2023 and 2024.

Phase 3

Initially set to start in July of 2024, CARB has delayed implementation of the periodic testing requirements to now become effective starting on January 1, 2025. Additionally, fleets traveling within California may submit a passing test up to 90 days before their compliance date, meaning electronic inspections can begin October 1, 2024, for vehicles due at the beginning of the program's new start of January 1, 2025. In 2025, vehicles with OBD systems will need to be tested twice per year and have that data sent to CARB. This testing frequency will increase to quarterly in 2027.



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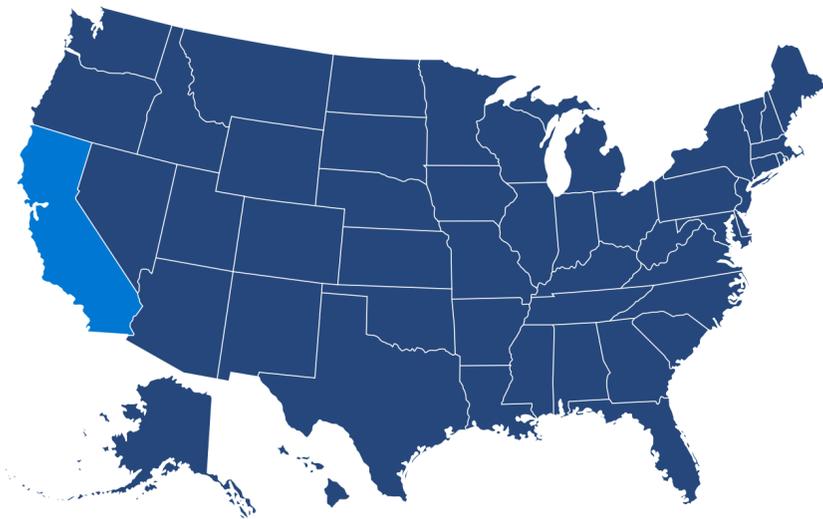
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What is the difference between CARB and EPA?

The [Environmental Protection Agency](#) (EPA) is a federal government agency that controls laws around air pollution – including carbon emissions – for the United States. CARB, on the other hand, is a board specific to the state of California that governs air pollution within the state borders. CARB standards are generally stricter than EPA standards, but both have certifications and compliance rules for heavy-duty vehicles. If you are a fleet that never operates in California, it is not required for you to be CARB compliant – however, if any of your trucks do venture into the state, they need to follow the guidelines. That's why it's best for fleets to complete their CARB certification on the off chance that they need to enter the state for any reason.



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Understanding CARB compliance



CARB compliance requirements

Requirements for motor carriers

Carriers need to make sure that their trucks meet all CARB certification requirements, including applying for CARB compliance certificates for each truck. If they are dispatching heavy-duty vehicles in California, must make sure that trucks to or from California are certified. If the carrier is based in California, they will need to register their certifications in the [Air Resources Board Equipment Registration](#) (ARBER) system.

Requirements for truck drivers

Drivers need to know whether their assigned vehicles are compliant within the state of California. They should also be aware of the whereabouts of their license, the truck and trailer's registration papers, bills of lading or freight bills, and their CARB certificate.

Requirements for California-based shippers

Shippers based outside of California are not required to be CARB compliant, but those based within the state need to ensure that all trucks are CARB compliant. Additionally, they must require carriers or brokers to provide proof of compliance.

Requirements for California-based receivers

As with shippers, receivers who are not based in California are not responsible for ensuring CARB compliance, but those based in California must follow the same rules as California-based shippers, including requiring proof of compliance.



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How to get a CARB certificate

To get a CARB certificate, visit the CARB website and enter all relevant details for each truck. You can request a sticker for the truck as well – stickers are not mandated by CARB law, but some facilities require them in order to enter the property.

CARB exemptions

These heavy-duty vehicle types are exempt from CARB regulation:

- Zero-emission vehicles
- Military tactical vehicles
- Emergency vehicles
- Historical vehicles
- New vehicles with engines certified to the most stringent NOx standard (less than or equal to 0.01 g/bhp-hr) – note that this is only valid during the first four years of Clean Truck Check implementation, ending in 2027
- Motorhomes registered outside of California
- Vehicles operating under an experimental permit

Tips for achieving and maintaining CARB compliance

CARB regulations and programs continue to evolve, so it is critical for professionals who use diesel equipment to stay informed. You don't want compliance issues to take you by surprise. Drivers and fleet owners can receive automatic email updates on HD I/M programs by signing up for [notifications](#) from CARB.

General information about current CARB regulations can be found on [The Truck Stop](#) page on the CARB website as well as the designated [Clean Truck Check](#) page.

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Understanding CARB violations

There are [multiple ways](#) a fleet can be identified as being in violation with CARB ordinances:

- Inspections
- Tips from the public
- Data analysis
- Referrals from other agencies
- Mandatory emissions reporting
- Voluntary disclosure



Once a violation has been brought to CARB’s attention, they collect more information and notify the responsible party. From there, they have the opportunity to discuss the violation, provide additional information and attempt to resolve the case appropriately. The penalty for CARB violations varies, and is decided on a number of factors, including; the extent of harm to public health, the compliance history of the defendant and the cooperation of the defendant throughout the case, among others. If a non-compliant vehicle is discovered, CARB has the capacity to cite any participant, including the driver, carrier, broker or freight forwarder, or the California-based shipper or receiver.

Some potential violations of the Clean Truck Check program include:

- ✘ Excessive smoke
- ✘ A missing or incorrect emission control label
- ✘ Tampering with any emissions-related vehicle part
- ✘ Refusal of inspection
- ✘ Failure to be in compliance with CARB regulations

The best way to avoid penalties is to keep a very close eye on compliance deadlines, take advantage of OBD systems wherever possible and make sure that drivers are well-versed on how to navigate a stop related to CARB compliance. A CARB officer – or, in some districts, a police officer – can ask drivers at any time to undergo an inspection, and it can happen at one of any various locations, including:

- Border crossings
- Rail yards
- Ports
- Distribution stations
- Agricultural inspection stations
- Truck scales

How can Geotab help with CARB/Clean Truck Check compliance?

Geotab has been working closely with CARB to make sure that our telematics solution meets their robust emissions compliance standards for the Clean Truck Check program.



Customers can easily meet CARB regulation requirements by using a telematics device.

Manual inspections necessitate taking vehicles and drivers off the road for the duration of the inspection, which costs fleets time and money.

This initiative aims to assist customers and potential clients in reducing CO₂ emissions and streamlining their compliance with regulatory agencies. The Geotab Emissions Diagnostic Report helps provide data insights on fleet emissions, making sure the required data meets the CARB authority regulatory requirements while enabling fleet managers and drivers to do their jobs with minimal downtime and associated costs.

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Staying compliant with government regulations doesn't need to be hard. Using Geotab's telematics solution, you can:



Collect critical engine data

that can be used for emissions reporting



Receive alerts for scheduled maintenance,

helping you keep your vehicles in good condition



Identify and reduce unnecessary idling,

cutting down on fuel waste and emissions



Manage and optimize EV vehicles

and their performance

To learn more about CARB and Geotab, [visit our website](#).



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