

**DMV Compliance  
Verification  
Began in 2020**

**February 2020**



# **A Guide to California's Clean Air Regulations for Heavy-Duty Diesel Vehicles**



# Gear Up, Breathe Easy

CARB is actively enforcing heavy-duty diesel vehicle regulations in support of California's clean air goals. Enforcement of clean diesel vehicle rules also provides a level playing field for those who have already done their part and are in compliance.

This booklet provides basic information and resources to help take the guesswork out of California's clean truck and bus requirements. If your vehicle does not meet state clean air laws, you could be subject to fines or temporarily lose the ability to operate in California.

## Disclaimer

While this booklet is intended to assist vehicle owners with their compliance efforts, it is the sole responsibility of fleets to ensure compliance with all applicable regulations.

## MORE INFORMATION

Visit CARB's comprehensive website for more detailed information regarding diesel vehicles and compliance options at [arb.ca.gov/truckstop](http://arb.ca.gov/truckstop)

Para obtener más información en español, por favor visite [arb.ca.gov/truckstop/espanol](http://arb.ca.gov/truckstop/espanol)

[8666DIESEL@arb.ca.gov](mailto:8666DIESEL@arb.ca.gov)

1-866-6DIESEL (1-866-634-3735)

# Contents

|                                              |       |
|----------------------------------------------|-------|
| What diesel rules apply to you?              | 3     |
| Trucks & Buses                               | 4     |
| Truck & Bus Regulation Compliance Options    | 5     |
| DMV Compliance Verification Begins in 2020   | 6     |
| Drayage Trucks                               | 7     |
| Transportation Refrigeration Units           | 8     |
| Tractors & Box-Type Trailers                 | 9     |
| Other Diesel Programs                        | 10    |
| Diesel Particulate Filter Care & Maintenance | 11-12 |
| Funding Assistance                           | 13    |
| Quick Tips                                   | 14    |

# What diesel rules apply to you?

Check all diesel rules that apply to you.

- ☐ Does your vehicle have a **Gross Vehicle Weight Rating (GVWR) of 14,000+ lbs.?**

See Trucks and Buses (private and federal fleets): page 4  
Other rules may apply, see below.

- ☐ Is your fleet **publicly owned**, a **solid waste collection vehicle**, or a **transit agency** or **utility**?

See Public Fleets and Others: page 10

- ☐ Do you visit **ports or intermodal rail yards**?

See Drayage Trucks: page 7

Do you own or operate a **reefer** (transport refrigeration unit)?

- ☐ See Transport Refrigeration Units: page 8

- ☐ Do you own or pull **53-foot or longer box-type trailers**?

See Tractors and Box-Type Trailers: page 9

- ☐ Do you own a vehicle with a **GVWR of 6,000+ lbs.?**

See Idling Limits: page 10

See Emission Control Labels: page 10

See Heavy-Duty Vehicle Inspection Program: page 10

See Periodic Smoke Inspection Program: page 10

# Truck & Bus Regulation

On-road diesel vehicles with a GVWR that is 14,001+ lbs. must reduce exhaust emissions by meeting particulate matter (PM) filter requirements and upgrading to newer engines. Vehicles with 2010 engine model year (EMY) or newer are fully compliant.

**Heavier Vehicles** with a GVWR greater than 26,000 lbs. must upgrade as shown in the table. Reporting is optional when exclusively using the Engine Model Year schedule for heavier vehicles below.

| EMY Schedule for Heavier Vehicles (>26,000 lbs. GVWR) |                     |                 |
|-------------------------------------------------------|---------------------|-----------------|
| EMY                                                   | Level 3 PM Filter   | 2010 EMY by     |
| Pre-1994                                              | Not required        | January 1, 2015 |
| 1994-1995                                             | Not required        | January 1, 2016 |
| 1996-1999                                             | January 1, 2012     | January 1, 2020 |
| 2000-2004                                             | January 1, 2013     | January 1, 2021 |
| 2005 or newer                                         | January 1, 2014     | January 1, 2022 |
| 2007-2009                                             | If already equipped | January 1, 2023 |

**Lighter Vehicles** with a GVWR between 14,001 and 26,000 lbs. need to be upgraded with 2010 or newer EMY. Check the table to determine your replacement date. Older vehicles may be upgraded to newer used equipment that is still in compliance with the schedule. No retrofit PM filter or reporting is required for lighter vehicles.

For more information call 1-866-6DIESEL (866-634-3735) or visit [arb.ca.gov/truckstop](http://arb.ca.gov/truckstop)

| EMY Schedule for Lighter Vehicles (14,001-26,000 lbs. GVWR) |                 |
|-------------------------------------------------------------|-----------------|
| EMY                                                         | 2010 EMY by     |
| 1995 and older                                              | January 1, 2015 |
| 1996                                                        | January 1, 2016 |
| 1997                                                        | January 1, 2017 |
| 1998                                                        | January 1, 2018 |
| 1999                                                        | January 1, 2019 |
| 2003 and older                                              | January 1, 2020 |
| 2004-2006                                                   | January 1, 2021 |
| 2007-2009                                                   | January 1, 2023 |

**Other compliance options** may help you comply with the regulation (see page 5). Reporting is required by January 31 of the compliance year to claim any available options.

# Compliance Options

Requires reporting in CARB's TRUCRS system

Listed below are the remaining compliance options available for 2019 and future compliance years. If you do not qualify for these options, you must follow the Engine Model Year (EMY) schedule found on page 4.

## Low-Use Exemption

The mileage limit is 1,000 miles per year in California. If you have vehicles designed to power other equipment while stationary, the limit is 100 hours per year in California.

## Low Mileage Construction Truck Option

Eligible vehicles with a particulate matter filter that don't meet the EMY schedule may operate up to 15,000 miles per year, and up to 20,000 miles for dump trucks. Lighter vehicles can no longer claim this flexibility option. No longer available for opt-in.

## Agricultural Vehicle Extension for Replacement Vehicles

Agricultural vehicles that reported for this flexibility option cannot operate more than 10,000 miles per year until January 1, 2023. No longer available for opt-in.

## NO<sub>x</sub> Exempt Area Extension

The counties that were added to the list of NO<sub>x</sub> Exempt Areas under the 2014 amendments have been removed, and a PM filter must already be installed to claim the NO<sub>x</sub> Exempt Area Extension.

## Retrofit by 2014 and Additional Time for Engine Replacement

Lighter vehicles with pre-2000 model year engines and heavier vehicles with pre-1996 model year engines that were retrofit by January 1, 2014 **and** reported to use this compliance option have until January 1, 2020 to delay engine replacement. If **all** the vehicles in your fleet had a diesel particulate filter by January 1, 2014, they may operate until January 1, 2023. No longer available for opt-in.

## Options No Longer Available

- Heavy Cranes Phase-In Option.
- The twenty-five percent annual vehicle upgrade limit.
- Cattle livestock trucks are no longer eligible for Specialty Ag Extension.

Note that the 2017 Lawson Lawsuit impacted many of the previously existing options and deadlines, and many are no longer available or have expired.

# DMV Compliance Verification Began in 2020

A new enforcement tool ensure that vehicles subject to CARB's Truck and Bus Regulation must meet the health-based requirements of that rule prior to obtaining registration through the California DMV. As of January 1, 2020, the DMV cannot register any vehicle that does not meet the requirements of the Truck and Bus Regulation.

## 2020 DMV Registration Requirements

You must be in compliance with the Truck and Bus Regulation in one of the following ways in order to register your vehicle with the DMV:

- The vehicle is using an allowable compliance option **and** is reported into the TRUCRS reporting system
- The vehicle is compliant with the Engine Model Year Schedule (see page 4)
- The vehicle is equipped with a 2010 or newer model year engine (usually a 2011 or newer model year vehicle) OR is repowered with 2010 or newer model year engine

## Currently out of compliance?

CARB can issue DMV registration blocks now if your vehicle does not meet air quality requirements.



# Drayage Trucks

Diesel-fueled trucks transporting cargo destined for or coming from California’s ports and intermodal rail yards (including bobtails and transporting chassis) must be registered in the statewide Drayage Truck Registry prior to entry. Drayage fleets must comply with requirements by operating only vehicles with 2007 MY engines or newer.

| Drayage Compliance Schedule (GVWR 26,001 lbs. or more) |                        |
|--------------------------------------------------------|------------------------|
| Truck Engine Model Year                                | Emission Requirements  |
| 2006 and older                                         | Not allowed            |
| 2007-2009                                              | Compliant through 2022 |
| 2010 and newer                                         | Fully compliant        |



By January 1, 2023, all class 7 and 8 diesel-fueled drayage trucks must have 2010 or newer engines. Trucks with 2010 or newer engines are fully compliant with both the Truck and Bus and Drayage regulations.

The exchange of marine or rail cargo (e.g. containers) between compliant and noncompliant drayage trucks is not allowed anywhere in California.

Note: If you are considered exempt from the Drayage Truck Regulation, you are currently subject to the Truck and Bus Regulation.

## Drayage Truck Regulation

1-888-247-4821 | [arb.ca.gov/drayagetruck](https://arb.ca.gov/drayagetruck)



# Transport Refrigeration Units (Reefers)

All transport refrigeration units (TRU) and TRU generator sets that operate in California must meet the in-use performance standards (see compliance table below).

Every California-based TRU and TRU generator set must be registered in Air Resources Board Equipment Registration (ARBER) and be labeled with a CARB Identification Number.

All terminals that are located in California where TRUs are based must submit operator reports to CARB at [arber.arb.ca.gov](http://arber.arb.ca.gov).



| TRU and TRU Generator Set Compliance Schedule |                                     |                                                          |
|-----------------------------------------------|-------------------------------------|----------------------------------------------------------|
| Engine Model Year                             | Low-Emission TRU (50% PM Reduction) | Ultra-Low-Emission TRU (85% PM Reduction)                |
| 2001 or older                                 | December 31, 2009                   | December 31, 2015                                        |
| 2002                                          | December 31, 2009                   | December 31, 2016                                        |
| 2003                                          | December 31, 2010                   | December 31, 2017                                        |
| 2004 (<25 hp)                                 | December 31, 2011                   | December 31, 2018                                        |
| 2004 (>25 hp)                                 | Not Applicable                      | December 31, 2011                                        |
| 2005 and newer                                | Not Applicable                      | December 31 <sup>st</sup> of the model year plus 7 years |

Fleets may comply by using Alternative Technologies (e.g. hybrid-electric TRUs or TRUs equipped with electric standby) or retrofitting with a verified diesel particulate filter. For guidance on using electric standby and hybrid-electric TRUs as an Alternative Technology compliance option, visit [arb.ca.gov/diesel/tru/documents/guidance\\_electricstandby\\_ets.pdf](http://arb.ca.gov/diesel/tru/documents/guidance_electricstandby_ets.pdf).

All businesses that hire carriers (e.g. brokers, shippers and receivers) must only use carriers that supply compliant TRUs.

## Transport Refrigeration Unit Regulation Helpline

1-888-TRU-ATCM (1-888-878-2826) | [arb.ca.gov/diesel/tru/tru.htm](http://arb.ca.gov/diesel/tru/tru.htm)

# Tractors & Box-type Trailers

The Tractor-Trailer Greenhouse Gas Regulation applies to 53-foot or longer box-type trailers and 2013 MY or older heavy-duty tractors that pull these trailers.

## Low-Rolling Resistance Tire Requirements\*

|                   | Tractors | Trailers |
|-------------------|----------|----------|
| 2013 and older MY | Required | Required |
| 2014 and newer MY | N/A      | Required |



\* Must be SmartWay™-certified.



### Tractor Requirements

All 2011 through 2013 MY sleeper-cab tractors must be SmartWay™ designated models. 2014 MY or newer tractors are covered by a federal regulation and are exempt from this rule.



### Trailer Aerodynamic Requirements

All trailers must be either SmartWay™-certified or aerodynamically retrofitted to a minimum standard.

## Delays and Exemptions

Certain trucks subject to the Transportation Refrigeration Unit (TRU) rule can phase in tire and aerodynamic requirements from 2018 to 2020. This only applies to TRUs with 2003 to 2009 MY reefer trailers equipped with 2003 or newer TRU engines.

Fleets must register to take advantage of short haul, local haul or storage trailer exemptions, and to apply for temporary use passes.

For more information, visit [arb.ca.gov/tractortrailer\\_ghg](http://arb.ca.gov/tractortrailer_ghg)

For a listing of SmartWay™-certified technologies, visit [arb.ca.gov/cc/hdghg/technologies.htm](http://arb.ca.gov/cc/hdghg/technologies.htm)

# Other Diesel Programs

CARB continues to actively enforce long-standing requirements for diesel vehicles including:

## Idling Limits

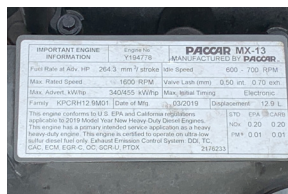
Idling Limits restrict diesel vehicles from idling more than five minutes. Idling in school zones is not allowed, with limited exceptions.

[arb.ca.gov/noidle](http://arb.ca.gov/noidle)



## Emission Control Labels

Emission Control Labels must be affixed to engines of all commercial heavy-duty diesel vehicles, and must be legible as proof the engine, at minimum, meets U.S. federal emissions standards for the engine model year.



## Periodic Smoke Inspection Program

The Periodic Smoke Inspection Program requires owners of California-based fleets of two or more diesel vehicles to perform annual smoke opacity tests and to keep records for at least two years for each vehicle. The requirement does not apply to cars or trucks that must undergo a Smog Check.



## Heavy-Duty Vehicle Inspection Program

The Heavy-Duty Vehicle Inspection Program uses random roadside inspections to verify that diesel engines do not smoke excessively and are tamper-free.

[arb.ca.gov/enf/hdvp/hdvp.htm](http://arb.ca.gov/enf/hdvp/hdvp.htm)



## Public Fleets and Others

Vehicles with a GVWR of 14,001+ lbs. that are owned by state and local government fleets, private utilities, and solid waste collection vehicles, must already have particulate matter (PM) filters (retrofit or originally equipped).



# Soot Filter: Buyer Beware



## Use only CARB-verified soot filters!

Selecting and installing the right CARB-verified diesel particulate filter (DPF), also known as a soot filter, for your truck takes time. If your filter is not installed by January 1<sup>st</sup> of the applicable compliance year, or ordered four months prior to the deadline, then you may be in violation. Visit [arb.ca.gov/truckstop](http://arb.ca.gov/truckstop) and select “Engine Filters” for details.

Be aware, filters must be verified for use on your vehicle. Used filters are not compliant and may damage your engine.

Compliance options that utilize new filter installation are limited. Therefore, installation of a filter without being aware of the available options may result in a non-compliant vehicle. Make sure you understand your compliance options.

The emissions performance of every DPF technology has been verified by CARB through rigorous testing. Keep in mind that a DPF is not a “fit and forget” device. Protect your DPF and engine by paying attention to a few simple but important maintenance requirements.

## Resolving DPF-Related Problems

While a DPF undergoes a rigorous verification process prior to sale, occasional problems may arise. Use the following three-step protocol to resolve DPF-related performance or reliability problems:

- Contact your installer (most problems are resolved in this manner)
- Contact the device manufacturer (if the installer cannot resolve your complaint)
- Contact CARB at 866-6DIESEL or [8666DIESEL@arb.ca.gov](mailto:8666DIESEL@arb.ca.gov) (if the installer or manufacturer cannot resolve your complaint).

# Diesel Particulate Filter Care & Maintenance

## Vehicle Maintenance is Critical

Top-notch vehicle engine maintenance is required. Remember to check fuel injectors, air filters, turbo chargers, fuel filter, fuel, coolant and lube oil. Failure to maintain the engine can void the DPF warranty!

## Don't Ignore the DPF Monitoring System

The cab of the truck features a monitoring system for the DPF that includes several indicator lights that give important feedback on DPF operation. The operator must understand and observe the DPF indicator lights on a regular basis and respond accordingly.

## Maintain the Proper Engine Duty Cycle

The duty cycle is the daily pattern of engine use. If the duty cycle of a truck is changed, it may affect how the filter works, and can lead to plugging. Notify your installer if you change the way you use your vehicle and be aware that it may affect the way your filter functions.

## Understand Your DPF's Regeneration System

The soot collected by the DPF must eventually be removed to keep the filter from clogging. The process of burning the soot in the filter is called regeneration and is done using high temperatures for a specified amount of time. Your truck is equipped with either a passive system that cleans the DPF automatically or an active system that may work automatically or require driver intervention to start a regeneration cycle.

## Handle the Filter with Care

DPFs are commonly made of ceramic, so do not bang or tap on your filter. A cracked or damaged filter may not be compliant with the Truck and Bus Regulation and could be a citable violation.

## DPF Cleaning Basics

The DPF is a maintenance item. It must be removed and cleaned periodically to get rid of accumulated noncombustible ash from the filter. Ash removal is separate from regeneration. Only use filter cleaning procedures approved by the DPF manufacturer.

---

A guide to operating your DPF is available at [arb.ca.gov/truckstop](http://arb.ca.gov/truckstop) or by contacting (866) 6DIESEL or [8666DIESEL@arb.ca.gov](mailto:8666DIESEL@arb.ca.gov).

# Funding Assistance

Grant funding is very limited but may be available to help fleets and individuals comply with California regulations earlier than is required.

Funding is available for vehicle replacements, retrofits, and zero-emission technologies. Please contact the local air district where you are based to determine if you are eligible for funding or if an opportunity may become available in the future. One example is the Funding Agricultural Replacement Measures for Emission Reductions (FARMER) Program, which provides funding through local air districts for agricultural harvesting equipment, heavy-duty trucks, agricultural pump engines, tractors, and other equipment used in agricultural operations.

CARB's loan assistance program (PLACE) helps small businesses with vehicles that operate at least 50 percent of the time in California. The program connects truckers to participating lenders to help purchase trucks, PM filters, aerodynamic retrofits or low-rolling resistance tires.

More information is available at [arb.ca.gov/loanassist](http://arb.ca.gov/loanassist)

Equipment owners are encouraged to apply as early as possible to maximize potential funding options. See the Financial Assistance section on the TruckStop website for more funding information.



# Quick Tips

- All fleet owners who use compliance options must report information about all eligible vehicles in the California fleet into the Truck Regulation Up-load, Compliance, and Reporting System (TRUCRS). The reporting period is open from January 1<sup>st</sup> to January 31<sup>st</sup> of the compliance year.
- Records must be kept and provided upon request to demonstrate compliance with flexibility options claimed in the reporting system.
- The Truck and Bus Regulation is based on the **model year of the engine**. Generally, the model year of an engine is one year older than the vehicle model year. For example, a 2007 truck is likely to have a 2006 engine model year.
- Vehicles that operate less than 1,000 annual miles within California can qualify for the low-mileage usage exemption. Odometer readings must be reported annually to CARB.
- Selecting and installing a diesel particulate filter (DPF), also known as a soot filter, for your truck takes time. Make sure to use only **CARB-verified** soot filters.
- The gross vehicle weight rating (GVWR) is assigned by the vehicle manufacturer and represents the maximum weight of the vehicle and what it can carry when fully loaded. Check the driver's door jam for the **GVWR label**. The GVWR is **not** the same as the unladen weight, gross combined weight rating, or registered weight rating.
- The **Engine (Emission) Family Name (EFN)** can be found on the emission control label located on the engine. The EFN is typically 10 to 12 characters, however very old engines may have an EFN only a few characters long.
- Be aware that tampering with your engine odometer can put you out of compliance with engine certification requirements and the Truck and Bus Regulation.



# Not sure if your diesel truck, bus or equipment complies with California air quality regulations?



## Register & Report



Use the TruckStop to find out what you need to do to comply and avoid penalties.

---

## Training



Sign up for free live training classes.

## FAQs



See questions and answers from our diesel hotline generated by truckers like you.

---

## Videos



View short videos that explain diesel requirements and reporting systems.

## DPF



Find out about diesel particulate filters.

---

## Funding



Financial assistance may be available to help clean up your trucks, buses and equipment.

## Answers



Visit the TruckStop at [arb.ca.gov/truckstop](http://arb.ca.gov/truckstop)