

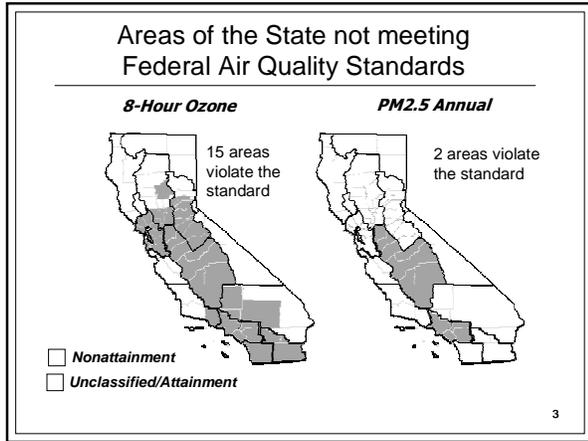


### Overview

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- Background
- Overview of Regulations
  - Diesel exhaust
  - Aerodynamic
- Tools for Customer Service
  - Funding Opportunities
  - Resources
- Seller To Do List

2



### Diesel Particulate Matter Exposure

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- 70% of known cancer risk from all air toxics
- Trucks and buses largest source of diesel particulate matter (PM)
- Diesel Risk Reduction Plan adopted in 2000
  - Risk reduction goals by 2010 and 2020
  - Stringent New Engine Standards
  - Cleaner Diesel Fuel (< 15 ppm sulfur)
  - Ensure In-Use Emissions Performance
  - Aggressive Reductions from In-Use Engines

4

### Heavy-Duty Truck and Bus Regulations

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- Heavy-Duty Vehicle Inspection Program
- Periodic Smoke Inspection Program
- Emission Control Labels (ECL)
- Idling
- In-Use Fleet Regulations

5

### In-Use Diesel Regulatory Activity

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<ul style="list-style-type: none"> <li>• Urban Buses (2000)</li> <li>• Garbage Trucks (2003)</li> <li>• School Bus Idling (2003)</li> <li>• Stationary Engines (2004)</li> <li>• <b>TRUs (2004)</b></li> <li>• Truck and Bus Idling (2004)</li> <li>• Portable Engines (2004)</li> <li>• Transit Fleet Vehicles (2005)</li> </ul>	<ul style="list-style-type: none"> <li>• Public Fleets &amp; Utilities (2005)</li> <li>• Cargo Handling Equipment at Ports and Rail Yards (2005)</li> <li>• <b>Port Trucks (2007)</b></li> <li>• Off-Road Vehicles (2007)</li> <li>• <b>Truck and Bus Regulation (2008)</b></li> <li>• Off-Road Agricultural Vehicles (Planned for 2011)</li> </ul>
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6

## Transport Refrigeration Units (TRU) Regulation



Affects TRUs and TRU Generator sets

7

## Who and What is Affected

TRU Regulation

- TRUs equipped on trucks, trailers, shipping containers, or railcars that operate in California
  - Includes those that enter California from out-of-state, Canada, or Mexico
- Operators of California terminals



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## Regulation Status

TRU Regulation

- Became law January 16, 2009
- Enforcement delayed until January 2010
- Amended November 18, 2010
  - 2003/2004 MY TRU performance standard
    - 2003 order by 12/31/2010, install by March 31, 2011
  - Manufacturer reporting

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## Compliance Options for Meeting In-Use Performance Standards

TRU Regulation

- Retrofit exhaust with required level of VDECS
  - Level 2 VDECS meets LETRU (50% PM reduction)
  - Level 3 VDECS meets ULETRU (85% PM reduction)
- Use Alternative Technology
- Replace in-use engine with new engine
  - New compliance date based on effective model year (based on emissions standard met)
- Replace in-use engine with rebuilt engine
  - Must be rebuilt to more stringent standard
  - New compliance date based on effective model year (based on emissions standard met)
  - See TRU Advisory 08-05

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## In-Use Performance Standards

Model Year of Engine	Compliance Date for Low Emission Standard	Compliance Date for Ultra Low Emission Standard
2001 OR OLDER	December 31 2008 (Extended to 12-31-09)	December 31, 2015
2002	December 31, 2009	December 31, 2016
2003	December 31, 2010	December 31, 2017
2004 (≥25 hp)	Skip to Ultra-Low Standard	December 31, 2011
2004 (<25 hp)	December 31, 2011	December 31, 2018
FUTURE YEARS	Skip to Ultra-Low Standard	December 31 of the model year plus 7 years

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## Registration Requirements

TRU Regulation

- What TRUs must be registered?
  - California-based TRUs
  - Leased units – see TRU Advisory 08-04
  - Out-of-state TRUs registration is voluntary
    - Will reduce inspection time
- Register online at ARB's Equipment Registration (ARBER) system
  - <http://www.arb.ca.gov/arber/arber.htm>
  - Obtain identification numbers (IDN) to affix to the unit

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TRU Regulation

## Registration Website - ARBER

<http://www.arb.ca.gov/arber/arber.htm>

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Thursday, December 16, 2010

**Up Links**

- Permitting Activities
- ARBER Registration

**Program Links**

- Login to ARBER
- System Requirements
- Forms
- General ARBER Instructions
- Help Topics

**RESOURCES**

- Contact Us
- Join the ARBER Email List
- RSS / Newsletter

**Air Resources Board Equipment Registration (ARBER)**  
This page last reviewed July 8, 2010

ARBER is an online registration program for the Transportation Refrigeration Unit and the Drayage Truck Regulations.

**ARBER Contacts:**  
 For general ARBER questions, send an email to [arber@arb.ca.gov](mailto:arber@arb.ca.gov)

Equipment Neck Registry  
 Toll-Free Helpline: 1-888-247-4621  
 Email: [drayagetrucks@arb.ca.gov](mailto:drayagetrucks@arb.ca.gov)

Transportation Refrigeration Units (ATCM)  
 Toll-Free Helpline: 1-888-878-2826  
 Email: [tru@arb.ca.gov](mailto:tru@arb.ca.gov)

ARBER Login

ARBER TRU Help Pages

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TRU Regulation

## Registration – Identification Numbers (IDNs) How do I affix the ARB IDNs to my TRU?

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- Affix to both sides of TRU housing, after the letters "ARB"
  - May be horizontal (one or two lines)
  - May be vertical (read from top to bottom)
  - See TRU Advisory 08-10-R1
- Letter color contrasts sharply with housing color
- Sized to be able to read from 50 feet

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TRU Regulation

## Example IDN Pictures

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TRU Regulation

## Enforcement Plan

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- Inspections at distribution centers, border crossings, scales, roadside inspection stations, terminals, and delivery points
- Failure to register - started in August 2009
  - Subject to citation, penalty, and must register within 30 days
- Failure to comply with in-use performance standards - started January 1, 2010
  - Subject to citation, penalty
  - 2010 Amendments – Exception for MY 2003 engines
    - Must purchase compliance technology by 12-31-2010
    - Must install compliance technology by 3-31-2011

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TRU Regulation

## TRU Regulation Contact Information

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- TRU website:  
<http://www.arb.ca.gov/diesel/tru.htm>
- TRU List Serve:  
<http://www.arb.ca.gov/listserv/tru.htm>
- ARBER website:  
<http://www.arb.ca.gov/arber/arber.htm>
- ARBER email: [arber@arb.ca.gov](mailto:arber@arb.ca.gov)
- TRU Help Line: 1-888-878-2826  
(1-888-TRU-ATCM)

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TRU Regulation

## Drayage Truck Regulation

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Affects diesel-fueled trucks entering California's ports and intermodal rail yards

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## Status

- Became law December 2008
- In effect and enforceable
- December 17, 2010 changes
  - Inclusion of Class 7 trucks
    - PM filters January 1, 2012 in SCAQMD
    - All meet Class 8 schedule January 1, 2014
  - Include drayage trucks operating off of port and rail yard grounds
  - Sunset regulation (est. 2020 timeframe)
- Additional 15-day public comment period <sup>19</sup>

## Emission Control Terminology

- “Level 3 VDECS”
  - Most effective PM filter retrofit on existing engines
  - Verified Diesel Emission Control Strategy (VDECS)
    - [www.arb.ca.gov/msprog/decsinstall/decsinstall.htm](http://www.arb.ca.gov/msprog/decsinstall/decsinstall.htm)
- “2007 model year engine”
  - Engine manufactured 2007 or later that meets the lowest particulate matter emission standard

## Basic Requirements

- Must register in Drayage Truck Registry
  - by September 30, 2009
- January 1, 2010
  - Pre-1994 prohibited from ports and intermodal rail yards
  - 1994 to 2003 trucks require Level 3 VDECS
- January 1, 2012/2013
  - 2004/2005-2006 MY require Level 3 VDECS
- January 1, 2014
  - Must have 2007 engines or newer
- January 1, 2020
  - Meet Truck and Bus requirements <sup>21</sup>

## Other Port Requirements

- Ports of Los Angeles and Long Beach
  - Have some stricter requirements
  - Currently Implemented
- Port of Oakland
  - Currently Implemented



San Pedro Bay Ports  
Clean Air Action Plan



## For More Information...

- Drayage truck regulation website:  
[www.arb.ca.gov/drayagetruck](http://www.arb.ca.gov/drayagetruck)
- Drayage truck phone number:  
1-888-247-4821
- Drayage truck registry:  
[www.arb.ca.gov/arber/arber.htm](http://www.arb.ca.gov/arber/arber.htm)
- Truck stop website: [www.arb.ca.gov/truckstop](http://www.arb.ca.gov/truckstop)



## Truck and Bus Regulation



Affects private and federally-owned diesel-fueled trucks and buses greater than 14,000 pounds GVWR

## Status

- Initially considered December 2008
- Currently in effect
- Amendments considered December 17, 2010
- Additional (15-day) changes
  - Construction vehicles
  - Clarifications



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## Applicability

- Diesel trucks and buses operating in California
  - Greater than 14,000 pounds gross vehicle weight rating (GVWR)
  - Agricultural use yard trucks with off-road engines
  - Interstate, intrastate, international, and other
- Any person, business, or government agency who owns, leases, rents, or sells a vehicle in California
- California based brokers and dispatchers

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## Applicability Continued

- Excludes:
  - Emergency vehicles
  - Military tactical vehicles
  - Personal use motor homes
  - Historic vehicles
  - Two engine cranes & two engine drill rigs
  - Personal use pickup trucks under 19,500 lbs GVWR
- Excludes most vehicles subject to other in-use regulations
  - Local, special district or state government owned
  - 1960-2006 MY solid waste collection vehicles
  - Public urban buses/transit fleet vehicles
  - Private utility become subject in 2021

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## Examples of Vehicle Types



Concrete Mixer



Dump Truck



Single Engine Drill Rig



Water Truck



Hay Squeeze



Tow Truck



Reefer Van



Fuel Tank Truck



Passenger Bus

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## Emission Control Terminology

- “PM filter”
  - Originally equipped on engines since 2007
  - Most effective PM filter retrofit on existing engines
    - Verified Diesel Emission Control Strategy (DECS)
    - [www.arb.ca.gov/msprog/decsinstall/decsinstall.htm](http://www.arb.ca.gov/msprog/decsinstall/decsinstall.htm)
- “Replace with 2010 engine”
  - Engine manufactured 2010 or later
  - Existing engine retrofit with PM/NOx retrofits
    - NOx retrofits not currently available

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## Regulation Overview

- Compliance schedule by engine model year for lighter and heavier trucks and buses
  - No reporting required
- Added flexibility with reporting
- Provisions for special cases and lower use
- Credits for early action and cleaner vehicles
- Sales disclosure requirement

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Truck and Bus Regulation

## Requirements for Lighter Trucks & Buses

GVWR 14,001 to 26,000 pounds

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Truck and Bus Regulation

## Compliance Schedule for Lighter Trucks\*

- Replace 20 year old engines starting 2015
  - 2010 or newer
  - A used truck with a future compliance date
- All 2010 engines by 2023
- No PM filter requirement
- No reporting required

Engine Model Year	Replace with 2010 engine by:
1995 & older	January 1, 2015
1996	January 1, 2016
1997	January 1, 2017
1998	January 1, 2018
1999	January 1, 2019
2003 & older	January 1, 2020
2004-2006	January 1, 2021
2007-2009	January 1, 2023

\*Vehicles 14,001 to 26,000 lbs GVWR

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Truck and Bus Regulation

## Compliance Credit for Lighter Trucks\*

- Install PM filter by 2014, exempt from replacement until 2020
- Credit towards heavier truck if lighter truck installs a PM retrofit by July 1, 2011
- Reporting required
- No other credits for lighter trucks and buses

\*Vehicles 14,001 to 26,000 lbs GVWR

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Truck and Bus Regulation

## Requirements for Heavier Trucks & Buses

GVWR more than 26,000 pounds

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Truck and Bus Regulation

## Compliance Schedule for Heavier Trucks\*

- PM filters on newer trucks 2012-2014
  - Replace after 8 years
- Replace older trucks
  - 2010 engine or
  - Used truck with future compliance date
- All 2010 engines by 2023
- No reporting required

Engine Year	Requirement
Pre-1994	No requirements until 2015, then 2010 engine
1994-1995	No requirements until 2016, then 2010 engine
1996-1999	PM filter from 2012 to 2020, then 2010 engine
2000-2004	PM filter from 2013 to 2020, then 2010 engine
2005-2006	PM filter from 2014 to 2020, then 2010 engine
2007-2009	No requirements until 2023, then 2010 engine
2010	Meets final requirements

\*Vehicles more than 26,000 lbs GVWR

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Truck and Bus Regulation

## Phase-In Option for Heavier Trucks\*

- Provides more flexibility
- Report all heavier trucks by January 31, 2012
- Originally equipped PM filters count
- Upgrade to 2010 engines starting 2020

Compliance Date	Vehicles with PM Filters
January 1, 2012	30%
January 1, 2013	60%
January 1, 2014	90%
January 1, 2015	90%
January 1, 2016	100%

\*Vehicles more than 26,000 lbs GVWR

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Truck & Bus Regulation

### Downsize Credit with Phase-In

- Reduced phase in requirement if fleet is smaller
  - Compared to October 1, 2006 baseline
- Expires January 1, 2016
- If the fleet size is 25% smaller
  - Subtract 25% from the PM requirement

Example if 25% smaller	2012	2013	2014	2015
Phase-in Option Requirements	30%	60%	90%	90%
Fleet Size Change	-25%	-25%	-25%	-25%
<b>Required for existing fleet</b>	<b>5%</b>	<b>35%</b>	<b>65%</b>	<b>65%</b>

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Truck & Bus Regulation

### Credits for Heavier Trucks\*

- Reduced requirement in phase-in option
  - For fleet downsized since 2006
  - Light or heavy vehicle with PM filter installed before July 1, 2011
  - Early purchase of 2007 or newer engines before 2012
  - Adding fuel efficient hybrids & alternative fueled
- Credits expires January 1, 2017
- Reporting required

\*Vehicles more than 26,000 lbs GVWR

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Truck and Bus Regulation

### Small Fleet\* Option for Heavier Trucks\*\*

- Phase-in option for heavier trucks
  - First PM filter by 2014
  - Second PM filter by 2015
  - All must have PM filter by 2016
- Replace engines that cannot be retrofit by 2018
- Upgrade to 2010 engines starting 2020
- Reporting starts January 31, 2012

\* Small fleets are one to three trucks over 14,000 lbs GVWR  
 \*\* Vehicles more than 26,000 lbs GVWR

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Truck and Bus Regulation

### Other Options for Heavier Trucks\*

- PM filter installed on any truck by 2014 complies until January 1, 2020
  - Report by January 31, 2014
- PM filter on all heavy trucks in fleet by 2014, no replacements until 2023
  - Report by January 31, 2014
- PM filters are not required if unsafe or not available for 1996 model year or newer
  - Replace engine if cannot be retrofit by 2018

\*Vehicles more than 26,000 lbs GVWR

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Truck and Bus Regulation

### Additional Provisions

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Truck and Bus Regulation

### Low Use Extensions for All Trucks

- Low Use Provision
  - Excluded for clean up requirements
  - Less than 1000 miles in California and
  - Less than 100 hours of PTO for stationary work
  - Emergency use excluded from usage
- Three day pass
  - 3 day permit to operate a non-compliant truck
  - One vehicle per year per company
- Reporting required

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Truck and Bus Regulation

### Attainment Area Operation

- Vehicle operated exclusively in NOx exempt areas
- Delay until 2014
- All PM filters by 2016
- No replacements needed
- Label on both doors or electronic tracking
- Report by January 31, 2012



NOx Exempt Area Counties - Alpine, Colusa, Del Norte, Glenn, Humboldt, Lake, Lassen, Mendocino, Modoc, Monterey, Plumas, San Benito, San Luis Obispo, Santa Barbara, Santa Cruz, Shasta, Sierra, Siskiyou, Sonoma (northern), Trinity, Tehama, and Yuba 43

Truck and Bus Regulation

### Agricultural Vehicle Provision Summary

- Delay until 2017 or 2023
- Qualifying vehicles must stay below the mileage thresholds or have specialty body types
- Report by March 31, 2011 then annually by January 31
- Total number eligible may not increase
- Label both doors with "AG"



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Truck and Bus Regulation

### Definitions of Agricultural Vehicle

- Farmer owned
  - All trucks used in agricultural operations
- Non-farmer owned
  - In field trucks
  - Farm to first processor truck
  - Fertilizer or pesticides delivery truck



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Truck and Bus Regulation

### Agricultural Vehicle Mileage Limits

- Begin January 1, 2011
- Delay until 2017 based on engine model year

Engine Year	Annual Mileage Limits
2006 or newer	25,000
1996-2005	20,000
Pre-1996	15,000

- Extension continues until 2023 for trucks operated less than **10,000** miles per year since January 1, 2011

\* 2007 and newer engines need not be considered agricultural vehicles 46

Truck and Bus Regulation

### Specialty Agricultural Vehicle Extension

- Compliance delayed until January 1, 2023
- Must be approved for extension, apply by March
- Limited to 2,200 statewide; 1,100 in the San Joaquin Valley
- Unlimited miles



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Truck and Bus Regulation

### Specialty Agricultural Vehicles

- Body and use type
  - Cotton module movers
  - Farmer-owned water trucks, not for hire
  - *Feed trucks that dispense feed to livestock. Not to resupply storage silos.*
  - Exclusively supplies crop dusting aircraft
  - *Lettuce harvest trucks with self loading beds (Fabco truck)*

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Truck and Bus Regulation

## Log Truck Provision

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- Report by January 2012
- Phase-in 2010 engines
- No PM retrofits
- Total number eligible may not increase
  - January 1, 2009 baseline
- Statewide with no mileage limits
- Must have “AG” label on both doors

January 1	2010 engines
2014	10%
2015	20%
2016	30%
2017	40%
2018	50%
2019	60%
2020	70%
2021	80%
2022	90%
2023	100%

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Truck and Bus Regulation

## Low-Mileage Construction Trucks

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- Report by January 31, 2012
- Dump trucks and other construction trucks
- Operate less than 15,000 miles per year
- Phase in PM filters 2014 to 2016
- Label “CT” on both doors
- 15-day changes

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Truck and Bus Regulation

## School Buses

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- Phase in PM filters if more than 14,000 lbs
- 1988-1993 are not required to be retrofitted until 2014
- Pre-1977 engines replaced by 2012
- No reporting required, must keep records
- Replace engine by 2018 if cannot be equipped with PM filter

January 1	PM filter
2012	33%
2013	66%
2014	100%



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Truck and Bus Regulation

## Two-Engine Street Sweepers

---

- Auxiliary engine must meet PM BACT at same time main engine cleaned-up
- Tier 0 auxiliary engine operational limits
  - 450 hours per year until 2014
  - 100 hours per year thereafter
  - Must report January 1 hour meter March 31, 2011
  - Report by January 31 thereafter

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Truck and Bus Regulation

## Other Provisions

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- Delay replacements 1 year if:
  - No used vehicle available with 2010 engine and
  - No PM filter available by 2014
  - Reporting required
- No penalty for manufacturer delays if filter, engine, or replacement vehicle is ordered 4 months before the compliance deadline
- Leased trucks
  - Contract less than 1 year – vehicle responsibility of Lessor
  - Contract 1 year or more – Lessor or as written in contract

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Truck and Bus Regulation

## Reporting & Disclosure

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## Truck and Bus Regulation Reporting Requirement

- No reporting for vehicles using compliance schedule
- March 31, 2011
  - Agricultural vehicle provisions
  - Sweepers with secondary tier 0 engines
- January 31, 2012
  - All flexibility options
- On-line reporting system
  - Truck Regulations Upload and Reporting System (TRUCRS)

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## Truck and Bus Regulation Disclosure Requirement

- Disclosure is currently required on the bill of sale
 

*“An on-road heavy-duty diesel or alternative-diesel vehicle operated in California may be subject to the California Air Resources Board Regulation to Reduce Particulate Matter and Criteria Pollutant Emissions from In-Use Heavy-Duty Diesel Vehicles. It therefore could be subject to exhaust retrofit or accelerated turnover requirements to reduce emissions of air pollutants. For more information, please visit the California Air Resources Board website at <http://www.arb.ca.gov/dieseltruck>.”*

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## Fleet Calculator

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## Compliance Tool Page

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## Fleet Calculator

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## Enter 2006 Fleet

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## Update Your Fleet for 2012

**Truck and Bus Regulation Help Hotline**  
1-866-634-3735

**Phase-In Option**

Compliance Requirement	No Credits	Credits	Adjusted Credits	No Credits	Credits	Adjusted Credits	No Credits	Credits	Adjusted Credits
PM Filters needed	30%	0%	30%	60%	0%	60%	80%	0%	80%
PM Filters in Fleet			30%			30%			40%

**2006 Fleet Information**

More than 25,000 lbs (Y/N)	Engine Year	More than 25,000 lbs (Y/N)	Engine Year	More than 25,000 lbs (Y/N)	Engine Year	More than 25,000 lbs (Y/N)	Engine Year
1996	N	1996	N	1996	N	1996	N
1999	Y	1999	Y	1999	Y	1999	Y
2000	Y	2000	Y	2000	Y	2000	Y
2003	Y	2003	Y	2003	Y	2003	Y
2006	Y	2006	Y	2006	Y	2006	Y
2007	Y	2007	Y	2007	Y	2007	Y
2010	Y	2010	Y	2010	Y	2010	Y

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## Fleet Calculator

**Phase-In Option**

Compliance Requirement	No Credits	Credits	Adjusted Credits	No Credits	Credits	Adjusted Credits	No Credits	Credits	Adjusted Credits
PM Filters needed	30%	0%	30%	60%	0%	60%	80%	0%	80%
PM Filters in Fleet			30%			30%			40%

**2006 Fleet Information**

More than 25,000 lbs (Y/N)	Engine Year	More than 25,000 lbs (Y/N)	Engine Year	More than 25,000 lbs (Y/N)	Engine Year	More than 25,000 lbs (Y/N)	Engine Year
1996	N	1996	N	1996	N	1996	N
1999	Y	1999	Y	1999	Y	1999	Y
2000	Y	2000	Y	2000	Y	2000	Y
2003	Y	2003	Y	2003	Y	2003	Y
2006	Y	2006	Y	2006	Y	2006	Y
2007	Y	2007	Y	2007	Y	2007	Y
2010	Y	2010	Y	2010	Y	2010	Y

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## Fleet Calculator – Compliance Schedule

**Best Available Control Technology (BACT) Schedule**  
(Compliance Option Based on the Engine Model Year)

The Phase-In option may provide more flexibility and an offset for fleets to take advantage of credits for downgrading since 2006. Double credits for early PM filter installation, credits for installing 2007 or newer model year engines early and other provisions in the regulation. Click on the Phase-In tab to use the Phase-In Option and credits. Be sure that you have the Phase-In option set to report detailed fleet information to January 1, 2012. This calculator is intended to allow fleets to experiment with various compliance options based on the fleet, but cannot substitute for reporting, detailed vehicle or compliance information. For more information on reporting go to [www.arb.ca.gov/dieseltruck](http://www.arb.ca.gov/dieseltruck).

**Compliance Strategy**

- Option 1: Install PM filters and replace with 2010 model year or newer vehicles (5 year old replacements)
- Option 2: Install PM filters and replace with 2007 model year or newer vehicles (7 year old replacements)
- Option 3: Replace with 2007 model year or newer vehicles (7 year old) instead of installing PM filters
- Option 4: Replace with 2010 model year or newer vehicles instead of installing PM filters

Final Model Year (Y/N)	Modify Compliance Strategy	Action Required
1996	N	Option 1: Replace with 2010 MY or newer engine by Jan 1, 2016
1999	Y	Option 1: Install PM filter by Jan 1, 2012 and replace with 2010 MY or newer engine by 2020
2000	Y	Option 1: Install PM filter by Jan 1, 2013 and replace with 2010 MY or newer engine by 2021
2003	Y	Option 1: Install PM filter by Jan 1, 2013 and replace with 2010 MY or newer engine by 2021
2006	Y	Option 1: Install PM filter by Jan 1, 2014 and replace with 2010 MY or newer engine by 2022
2007	Y	Option 1: Install PM filter by Jan 1, 2014 and replace with 2010 MY or newer engine by 2023
2010	Y	Option 1: No action required

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**Truck and Bus Regulation (In-Use) Regulation – Modesto Edition**

**Truck and Bus Regulation On-Road Heavy-Duty Diesel Vehicles (In-Use) Regulation**

**Background:** The regulation was initially considered in 2008 and requires fleets that operate in California to reduce diesel truck and bus emissions by retrofitting existing engines. Amendments were considered on December 10, 2010, February 1, 2012 and replacement of late trucks starting January 1, 2015. By January 1, 2023, nearly all heavy-duty trucks must have 2010 model year engines or equivalent.

**What's New:** Summary of the Amendments Considered by the Board Including Enforcement Delay and Reporting Waiver.

**www.arb.ca.gov/dieseltruck**  
(866) 634-3735 or 8666diesel@arb.ca.gov

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## Heavy Duty Vehicle Greenhouse Gas (Tractor Trailer GHG) Regulation



**Early Action Measure under AB 32 – The Global Warming Solutions Act of 2006**

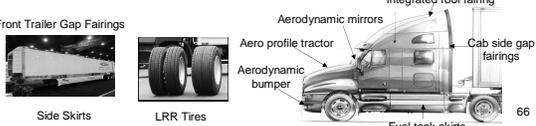
Affects 53 foot and longer box-type trailers and the tractors that pull them.

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## Reduce Green House Gas Emissions by Improving:

*Tractor Trailer GHG Regulation*

- Tractor Aerodynamics
  - Streamlined hood, sleeper cab roof fairings, gap fairings, fuel tank fairings, aerodynamic bumper and mirrors
- Trailer Aerodynamics
  - Side skirts, front gap fairings, rear trailer fairings
- Tire Rolling Resistance
  - Low rolling resistance (LRR) tires
- Smartway Program Information: <http://epa.gov/smartway/>



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## Applicability

- 53 foot longer box-type trailers (dry-van & refrigerated-van trailers) and the tractors that pull them
- Responsible for compliance: owner, driver, motor carrier, California-based broker, and California-based shipper
- All affected vehicles operating in California regardless of where they're registered

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Tractor-Trailer GHG

## Exempt Tractors and Trailers (No registration required)

- Drayage tractors & trailers
  - Operate within a 100 mile radius of port or intermodal rail yard
- Container-chassis trailers
- Drop-frame van trailers
- Curtain-side van trailers
- Emergency vehicles
- Solid waste vehicles
- Military vehicles



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## Status of the Regulation

- Became law December 9, 2009
- December 17, 2010 Board modifications
  - Option 2 Large Fleet Compliance Schedule
  - Delay low rolling resistant tire requirements (LRR) for 2010 and older trailers and tractors
  - Ability to report annually
  - Storage trailer exemption
  - Other

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## Regulation Overview

- Requirements for new and existing tractors
  - Aerodynamic equipment and LRR tires on new
  - LRR tires on existing
- Requirements for new and existing trailers
  - Aerodynamic equipment and LRR tires on both new and existing
- Reporting requirements for optional compliance and exemptions
- Local haul, short haul, storage and other exemptions
- Temporary passes
- Lease agreements and disclosure requirements

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Tractor Trailer GHG Regulation

## Tractor Requirements

- Tractor Requirements
  - 2011+ model year (MY) sleeper cabs: "SmartWay" certified as of 1/1/2010
  - 2011+ MY day cabs: low rolling resistance tires by 1/1/2010
  - All pre-2011 MY sleeper cabs & day cabs: low rolling resistance tires by 1/1/2013



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## Open-Shoulder Tire Exemption

- Applies to new tractors only
  - 2011+ MY sleeper-cab and day-cab tractors
    - Allows use of two or more open-shoulder drive tires that are not SmartWay low-rolling resistance tires until January 1, 2013
  - After January 1, 2013 all open-shoulder low-rolling resistance tires on affected tractors must be SmartWay verified

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## Trailer Requirements



### Trailer Requirements

- 2011+ MY 53-ft+ box-type: SmartWay certified or
  - Retrofitted with SmartWay technologies by 1/1/2010
    - Low rolling resistance tires (1.5%+ fuel efficiency improvement)
    - Aerodynamic devices
      - » 5%+ fuel efficiency improvement for dry van
      - » 4%+ fuel efficiency improvement for reefer van
- Pre-2011 MY 53-ft+ box-type
  - Same requirements as 2011+ MY trailers
  - Aerodynamic requirements by 1/1/2013 or choose delayed compliance option
  - LRR requirement delayed until January 1, 2017

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## Optional Large Fleet Compliance Plan

- Large fleet – 21 or more trailers
- Registration: Option 1 by July 1, 2010; Option 2 by July 1, 2011
- Allow fleets to report their compliance activity upfront to ARB or on an annual basis

Option 1 % of Trailers	Option 2 % of Trailers	Compliance Before
5%	--	January 1, 2011
15%	20%	January 1, 2012
30%	40%	January 1, 2013
50%	60%	January 1, 2014
75%	80%	January 1, 2015
100%	100%	January 1, 2016

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## Optional Small Fleet Compliance Plan



- Small fleet – 20 or fewer trailers
- Phase-in: 2013 – 2016
- Submit compliance plan by **July 1, 2012**
- Fleets may report compliance activity upfront to ARB or on an annual basis

Percentage of Trailers	Compliance Before
25%	January 1, 2014
50%	January 1, 2015
75%	January 1, 2016
100%	January 1, 2017

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## Provisions for Refrigerated Vans\*

- Applicable to 2003 - 2009 MY reefer trailers with 2003 or newer TRUs
- **No reporting** required for these trailers

Trailer Model Year	Compliance Before
2003-2004	January 1, 2018
2005-2006	January 1, 2019
2007-2009	January 1, 2020

\*This is applicable for the Tractor-Trailer GHG Rule only and does not change or delay any of the engine requirements under the separate Transport Refrigeration Unit Regulation.

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## Short-Haul Exemption

### Tractors only

- 50K miles or less per year
- Exempted from both the aerodynamic and LRR tires
- Must register vehicle with annual updates on mileage to ARB
- On-line TRUCRS to register

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## Local-Haul Exemption

### Tractors and trailers

- Operation restricted to within a 100-mile radius of registered home base
- Exemption from aerodynamic requirement only
- *LRR tires still required*
- Relocation Pass for local-haul
- Must register vehicle and home base information with ARB prior to operation using ARB's on-line TRUCRS

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### Storage Trailer Exemption

- Exempt from aerodynamics and tire requirements
- Must be empty when traveling on California highways
- Relocation pass required for storage trailers when traveling with freight
- Must register vehicle and home base information with ARB prior to operation using ARB's on-line TRUCRS

### Temporary Passes

Pass Description	Situation
<b>Relocation Pass for Local-Haul and Storage Trailers</b> (4 passes a year per tractor/trailer; 3 day pass; must operate the local haul/storage for 30 days)	Allows movement of loaded exempt local-haul trailers and exempt storage trailers within California
<b>Transfer of Ownership Pass for Trailers</b> (3 day pass with longer time upon Executive Officer approval)	Allows delivery of loaded trailers from transferor's location to transferee's location
<b>Non-Compliant Tractor Pass</b> (3 day pass; one tractor per fleet per year) sunsets 2015	Allows a non-compliant tractor to pull a trailer in California

### Modifications to Verified Equipment

- Aerodynamic technologies must be verified or certified by U.S. EPA SmartWay program, *and*
- Aerodynamic technologies must either be installed:
  - To maintain their status as SmartWay verified aerodynamic technologies according to the requirements of U.S. EPA SmartWay program, *or*
  - In an alternate configuration approved by the ARB

### Trailer Aerodynamic Compliance Delay

- Allows owners of trailers to apply for a one year delay to install aerodynamic technologies if trailers cannot be retrofitted with existing U.S. EPA SmartWay aerodynamic technologies
- Must demonstrate installation of existing aerodynamic technologies is not feasible
- Requires Executive Officer approval

### Definition of Owner

The "Owner" is the person registered as the owner by the DMV, except in the following situations:

Situation	Owner
Tractor/trailer under third-party maintenance contract	Person contracted to maintain/install aero/LRR tires
Tractor/trailer owned by Federal government (not registered by DMV)	Federal Government
Leased tractor	Lessee: If lease or contract includes disclosure, otherwise lessor
Leased trailer	Lessee: If lease or contract includes disclosure and allows modification/exchange of trailer for pre 1/1/2013 leases, otherwise lessor is owner

### Leasing of Tractors Disclosure Language

- Disclosure language  
 "The lessee of this heavy-duty tractor understands that when using a heavy-duty tractor to pull a 53-foot or longer box type trailer on a highway within California compliant with sections 95300-95311, title 17, California Code of Regulations, and that it is the responsibility of the lessee to ensure this heavy-duty tractor is compliant. The regulations may require this heavy-duty tractor to have low rolling resistance tires that are U.S. Environmental Protection Agency (U.S. EPA) Verified SmartWay Technologies prior to current or future use in California, or may entirely prohibit use of this tractor in California if it is a model year 2011 or later tractor and is not a U.S. EPA Certified SmartWay Tractor."

## Leasing of Trailers prior to January 1, 2013 Disclosure Language

- Disclosure Language

"The lessee of this box type trailer understands that when using a heavy-duty tractor to pull a 53-foot or longer box type trailer on a highway within California, the box-type trailer must be compliant with sections 95300-95311, title 17, California Code of Regulations, and that it is the responsibility of the lessee to ensure this box-type trailer is compliant. The regulations may require this trailer to have low rolling resistance tires and aerodynamic technologies that are U.S. Environmental Protection Agency Verified SmartWay Technologies prior to current or future use in California".

- Revised disclosure language for leasing of trailers on or after January 1, 2013, see regulation.

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## Sales Disclosure

- Requirement for disclosure on bill of sale
- Disclosure language:

"A heavy-duty tractor and 53-foot or longer box-type trailer operated in California may be subject to the California Air Resources Board Heavy-Duty Vehicle Greenhouse Gas Emission Reduction Measure.

These vehicles may be required to use low-rolling resistance tires and meet aerodynamic equipment requirements to reduce greenhouse gas emissions.

For more information, please visit the California Air Resources Board website at

[www.arb.ca.gov/cc/hdghg/hdghg.htm](http://www.arb.ca.gov/cc/hdghg/hdghg.htm)"

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## Dealer/Lessor Record Keeping

- California Licensed Dealers to retain records for 3 years for selling and leasing of vehicles and equipment
- Lessor to retain records for 3 years for lease agreements that must contain disclosure language regarding regulatory requirements for lessee

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## Tractor-Trailer GHG Regulation Page

The screenshot shows the California Air Resources Board website page for Heavy-Duty (Tractor and Trailer) Greenhouse Gas Regulation. The page features a navigation menu with options like Home, Programs, Rulemaking, Board Meetings, Laws & Regulations, Data & Statistics, Permits, ETC., and Events. The main content area includes a 'Background' section with a truck image and text explaining the regulation's goal to reduce greenhouse gas emissions by 2020. A 'What's New' section mentions a recent training seminar.

[www.arb.ca.gov/cc/hdghg/hdghg.htm](http://www.arb.ca.gov/cc/hdghg/hdghg.htm)

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## Tools For Customer Service



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## Funding Opportunities for Diesel Truck Owners



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## Air Resources Board Financial Incentive Programs

- Grant programs and vouchers
- Loan guarantee programs
- Funding is available for the following:
  - Vehicle replacements
  - Engine retrofits
  - Engine hybrid technologies
  - SmartWay approved aerodynamic technologies
  - Engine repowers (off-road only)

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## Voucher Incentive Program (VIP)

- Streamlined grant process through participating truck dealers
- Replace a truck with a 2007 or newer truck
- Who Qualifies:
  - Small fleet (**3 or fewer trucks**)
  - 2002 MY or older trucks
  - 19,501 + pounds GVWR
  - Registered in CA for past 24 months
  - Operates in CA at least 75% of the time

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## Goods Movement Program

- Who Qualifies:
  - Must be involved in the **movements of goods.**
  - Any fleet size
  - Vehicle greater than 31,000 lbs (GVWR)
  - Operated at least 75% in CA for the past 2 years
  - Limited funding availability for Drayage trucks

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## Goods Movement Program

- **Funding Available** (per truck) **in March 2011**
  - Replacements: Up to \$60,000 (Non-Drayage), up to \$50,000 (Drayage)
  - Retrofits: Up to \$20,000
  - Repowers: Up to \$30,000
- Multiple District Solicitation

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## Loan Assistance Program

- Providing Loan Assistance for California Equipment (PLACE)
- Who Qualifies:
  - Small Businesses
  - Average annual revenues of \$10 million or less
  - 100 or fewer employees
  - Fleet has 20 or fewer trucks
- Eligible retrofits, replacements, SmartWay certified trailers and aerodynamic technologies
- Can be used in combination with VIP or Goods Movement grants

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## Hybrid Truck and Bus Voucher Incentive Project (HVIP)

- Battery electric and hybrid trucks and buses
- Designed to offset about half the incremental cost of hybrid trucks
- Uses simplified purchase voucher
- Approximately \$18 million available for purchase incentives in FY11 project
- FY11 HVIP set to launch January 31<sup>st</sup>
- [www.californiahvip.com](http://www.californiahvip.com)

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California Environmental Protection Agency  
**Air Resources Board**

**New regulations may affect your vehicle. Check that your compliance for subject to significant flex.**

**California Heavy-Duty Diesel, Diesel, and Transport Regulations** - These regulations, which are subject to significant flex, are subject to the state of California's "flex" rules. If you are subject to these regulations, you may be able to use "flex" to reduce your compliance costs. For more information, visit [www.arb.ca.gov](http://www.arb.ca.gov).

**California Air Resources Board** - The California Air Resources Board (ARB) is the state agency responsible for enforcing California's air quality standards. The ARB is also responsible for developing and implementing California's air quality management plan (AQMP). The ARB's website provides information on a wide range of air quality issues, including regulations, enforcement, and public participation.

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For more information on California diesel regulations and the programs that fund them, please call our Diesel Hotline at 866-6DIESEL (866-634-3735), by email at [866DIESEL@arb.ca.gov](mailto:866DIESEL@arb.ca.gov) or visit the TruckStop website at [www.arb.ca.gov/truckstop](http://www.arb.ca.gov/truckstop).

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California Environmental Protection Agency  
**AIR RESOURCES BOARD**

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May, February 4, 2010

**Heavy-Duty Diesel Emission Control Strategy (DECS) Installation and Maintenance**

This page last revised December 7, 2010

FAQ | Find an Installer | Training Videos | Verified Devices

**Related Links:**  
 ARB Programs  
 Diesel Vehicles and Equipment  
 Mobile Sources  
 DECS Installation and Maintenance

**Related Links:**  
 Advertisers  
 Background  
 Compliance  
 Technology  
 Frequently Asked Questions  
 Regulatory Activities  
 Other Diesel Fuel  
 (Regulation) / Program  
 The Truck Stop

**SOXES:**  
 Contact Us  
 Just Any Mobile Source  
 (E-mail Links)  
 RSS / Newsletter

**Background:**  
 This page provides links to documents and general guidance to operators of diesel vehicles or equipment who are interested in purchasing Diesel Emission Control Strategies (DECS) to comply with Air Resources Board in-use diesel regulations.

A DECS is a technology that reduces harmful air pollution from diesel engine exhaust before it is emitted into the air. The most common technology used as a DECS is a diesel particulate filter that substitutes for the original factory-installed ARB regulators and approves DECS to meet specific particulate matter or nitrogen oxide emission reductions.

To receive regular updates on addresses, training, or workshops regarding ARB in-use regulations, please subscribe to the appropriate Mobile Source [www.arb.ca.gov](http://www.arb.ca.gov) list.

**Related Activities:**  
 Advertisers are brief policy documents produced by staff to clarify program policies and regulations.  
 • DECS compliance overview and in-operation assessments  
 • How to use DECS for vehicles of the same model  
 • Installation of diesel particulate filters (DPF) on diesel engines with stock filters  
 • DECS that do not meet the 2007 POC emission limit cannot be used starting after January 1, 2009

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**NEW AIR POLLUTION RULES FOR DIESEL TRUCKS ARE NOW IN EFFECT IN CALIFORNIA**

Find out about funding opportunities and how to comply:  
 Visit TruckStop, ARB's user-friendly tool at:  
[www.arb.ca.gov/truckstop](http://www.arb.ca.gov/truckstop)  
 or call 866-6DIESEL (634-3735)

California Environmental Protection Agency  
**Air Resources Board**

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**Truck Stop - Online Resource**

the TRUCK STOP

All diesel fueled trucks, buses, trailers and transportation refrigeration units operating in California, including those based out of state, are required by regulators to take steps to reduce air pollution. Please call the California Air Resources Board (ARB) Diesel Hotline at 866-6DIESEL (866-634-3735) for more information, or click the link below.

Truckstop on Español

Information About Clean Air Requirements For:

**DIESEL VEHICLES** | **TRAILERS** | **TRUCKS** | **FUNDING** | **USEFUL LINKS**

Regulation Index  
 Training  
 Funding Resources Index  
 Compliance Guidance  
 Reporting & Registration  
 Private Notices  
 California Truckstop News

**Helpful Links & Resource centers:**  
 • For more information on the updates from the ARB click on the links below for more information:  
**DIESEL TRUCK OWNERS AND POLLUTION REGULATIONS UPDATE**

98-100 Truckstop | December 1999 | 866-6DIESEL (866-634-3735) | California

**www.arb.ca.gov/truckstop 866-6DIESEL or 866-634-3735**

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**Vehicle & Equipment Sellers**

- Know your sales disclosure requirements
- Direct customers to resources
  - TruckStop
  - 1-866-6DIESEL
  - 8666diesel@arb.ca.gov
- Link "TruckStop" on your website
- Distribute brochures & fact sheets
- Keep up to date by getting on list servers



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