

In-Use Off-Road Diesel Vehicle Regulation

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San Francisco, Sept 4 & 5, 2014



California Environmental Protection Agency

Air Resources Board



Outline

- Background
- In-Use Off-Road Diesel Vehicle Regulation
- Fleet Reporting and Compliance Statistics
- Regulatory and Implementation Experiences
- Looking Forward
- Contact Information

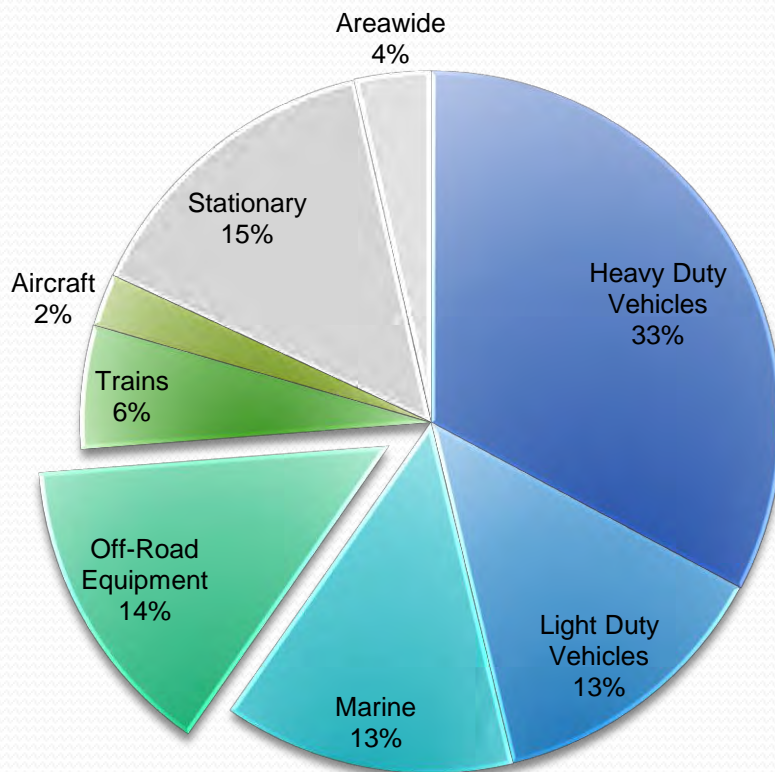
Background

- ARB identified diesel exhaust PM as a toxic air contaminant in 1998
 - Contains many harmful chemicals
 - 70% of all airborne cancer risk
- Diesel Risk Reduction Plan in 2000
 - Stricter new engine standards
 - Cleaner diesel fuel (≤ 15 ppm)
 - Accelerated replacement of existing diesel engines and installation of Verified Diesel Emission Control Strategies (VDECS) through regulations
- Need to attain federal air quality standards
 - Significant reductions in NO_x needed
 - South Coast/San Joaquin Valley

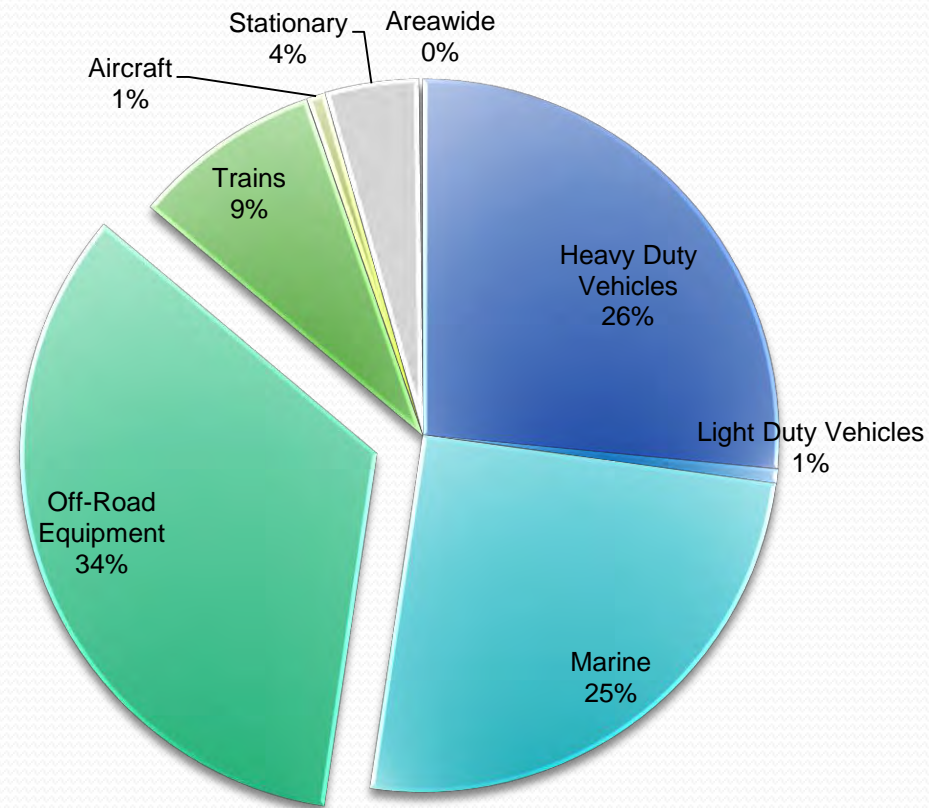


Statewide Emission Sources

2014 Statewide NOx Emissions



2014 Statewide Diesel PM2.5 Emissions



In-Use Off-Road Diesel Vehicle Regulation

- Adopted on July 26, 2007, major revisions December 2010
- EPA granted full enforcement authority September 2013
- Reduces diesel PM and NO_x emissions
- Affects existing off-road heavy-duty diesel vehicles in California
- Vehicles used in construction, mining, industrial operations and others
- Online reporting & compliance database is named DOORS
 - Diesel Off-road Online Reporting System

Regulation Fundamentals

- Reporting
- Record Keeping
- Labeling (EIN)
- 5 Minute Idle Limit
- Fleet Performance Milestones



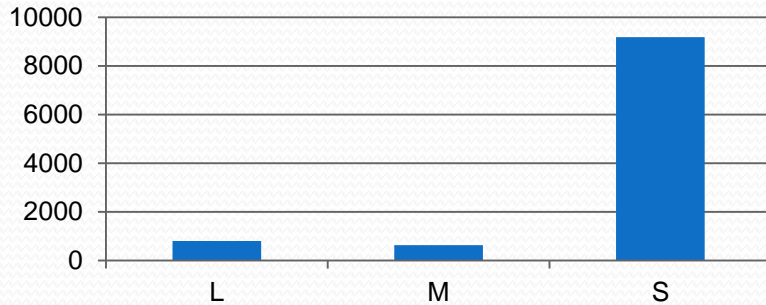
Fleet Size	Compliance Dates
Large	2014-2023
Medium	2017-2023
Small	2019-2028

Fleet Reporting and Compliance Statistics



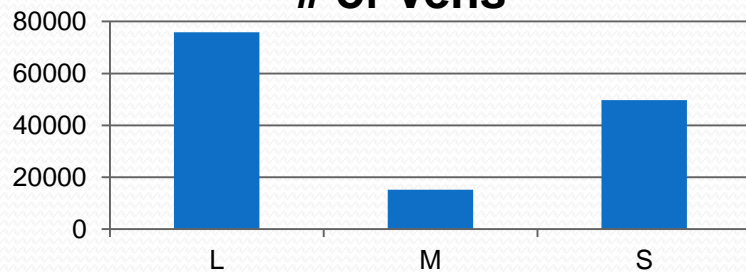
Reported DOORS Data

of Fleets



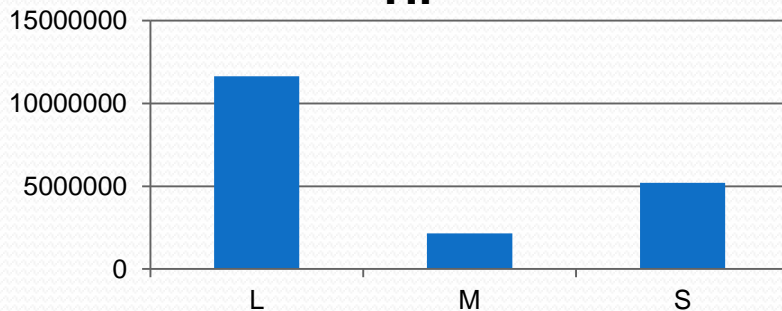
~10,000 Fleets with
~140,000 Vehicles

of Vehs



Fleet Size	# Vehs / Fleet
Large	94
Medium	24
Small	5

HP



Fleet Size	HP / Veh
Large	154
Medium	142
Small	105

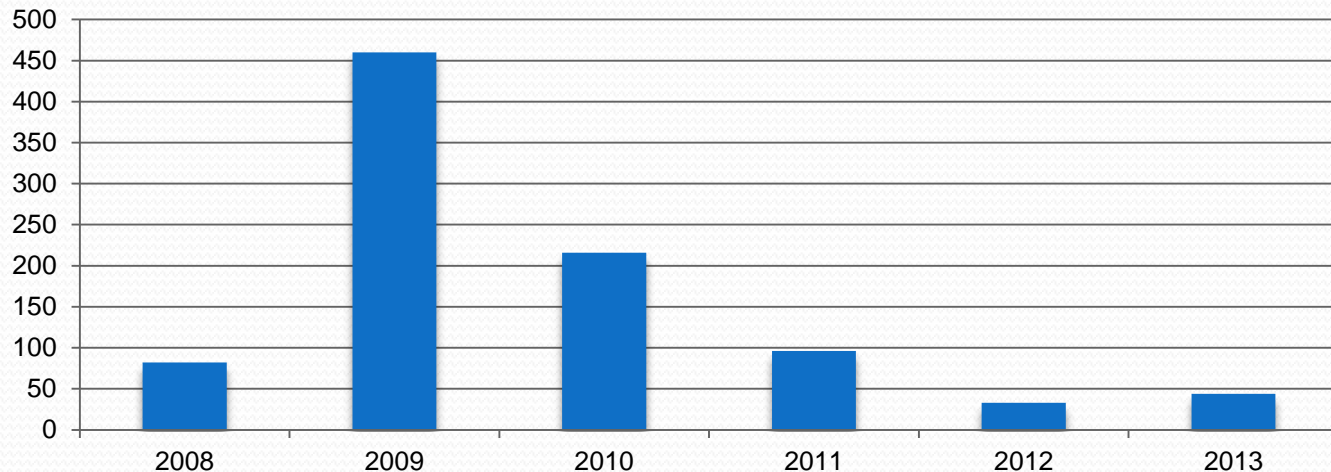
Compliance Statistics

- Large fleets: over 90% are compliant through 2015
- Medium fleets: over 50% are compliant through 2017
- Small fleets: over 80% are compliant through 2019
- Vehicles exempt from emission performance standards:
 - 15,000 reported in exempt categories
 - 75% of the exempt vehicles are low-use

Turnover Statistics

- Fleets selling and retiring vehicles
 - Natural attrition
 - Downsizing
 - Off-Road Regulation-driven
 - From 2009 through July 2014, fleets sold 27,000 vehicles
 - Non-dealership and non-rental companies
- Permanent Low-Use: 800 vehicles
- Repowers: 200 vehicles

VDECS Installations by Year



- Approximately 900 VDECS installations have been reported

Emission Benefits of the In-Use Off-Road Diesel Vehicle Regulation in 2023

NOx			PM		
Baseline (tpd)	Emission Reductions (tpd)	%	Baseline (tpd)	Emission Reductions (tpd)	%
52	9	17%	2.4	0.5	21%

Regulatory and Implementation Experiences

- Economic Recession
- Technology Challenges
- Regulatory Flexibilities and Complexities
- Education and Outreach



Knowledge Center

<http://www.arb.ca.gov/ordiesel>

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Tuesday, August 12, 2014

In-Use Off-Road Diesel Vehicle Regulation

This page last reviewed August 8, 2014

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**Exhaust
Retrofits**

**Retrofit
Safety &
Exemptions**

UP LINKS

- Reducing Air Pollution - ARB Programs
 - Diesel Program
 - Mobile Vehicles and Equipment
 - Mobile Sources
 - Operators
 - Off-Road Diesel

PROGRAM LINKS

- Archived Documents
- Background
- Current Regulation
- Diesel Exhaust Retrofits
- DOORS Public Information
- EIN Label Vendors
- Emails Sent to Fleets

On July 26, 2007, the Air Resources Board (ARB) adopted a regulation to reduce diesel particulate matter (PM) and oxides of nitrogen (NOx) emissions from in-use (existing) off-road heavy-duty diesel vehicles in California. Such vehicles are used in construction, mining, and industrial operations. The regulatory language and information on reporting and compliance tools can be accessed by clicking the quick links buttons above. For more information, please contact the [Diesel Hotline](#).

Looking Forward

- Off-Road Technology Assessments
- Comprehensive Regulatory Strategies
 - Synergies with Greenhouse Gases and Criteria Pollutants Strategies
 - Industry Dynamics
 - Economic and Air Quality Balance
 - Incentives
 - Technologically viable
 - Clean air

In-Use Off-Road Regulation Contact Information

- www.arb.ca.gov/ordiesel
- 877-59DOORS (877-593-6677)
- doors@arb.ca.gov
- Free Training - Course 504
 - Training course presentation on 504 page
 - Video available at www.arb.ca.gov/msprog/truckstop/video/504/504.htm



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Questions?

