



California Environmental Protection Agency

AIR RESOURCES BOARD

Mobile Source Control Division

Course # 504

In-Use Off-Road Diesel Vehicle Regulation



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Course #504: In-Use Off-Road Diesel Vehicle Regulation Training



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California Environmental Protection Agency

Air Resources Board



Outline

- Need for Emission Reductions
- Regulatory Background
- Applicability
- Regulation Requirements
 - Currently In Effect
 - Future
- Other Provisions
- Resources and Contact Information

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Need for Emission Reductions



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Most Polluted Regions in the United States

Ozone (smog)

1. Los Angeles Region
2. Visalia, CA
3. Bakersfield, CA
4. Fresno, CA
5. Hanford, CA
6. Sacramento, CA
7. San Diego, CA
8. Houston, TX
9. San Luis Obispo, CA
10. Merced, CA

Particulates (PM)

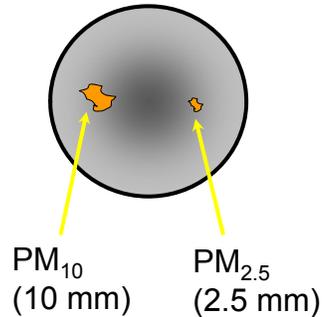
1. Bakersfield, CA
2. Hanford, CA
3. Los Angeles Region
4. Visalia, CA
5. Fresno, CA
6. Pittsburgh, PA
7. Phoenix, AZ
8. Cincinnati, OH
9. Louisville, KY
10. Philadelphia, PA

*American Lung Association "State of the Air" Report 2012

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Particulate Matter (PM)

- PM is any solid or liquid particles that are suspended in the air
- Causes asthma attacks, causes or aggravates bronchitis and other lung diseases, and reduces the body's ability to fight infections
- Reduces visibility



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Oxides of Nitrogen (NO_x)

- NO_x is an ingredient of photo-chemical smog / ground level ozone
- Health Effects - inflamed lung tissue, pain breathing, eye/nose/throat irritation, increased risk of heart and lung disease
- Environmental Effects - reduced visibility, stunted plant growth, reduced crop yields

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Regulatory Background



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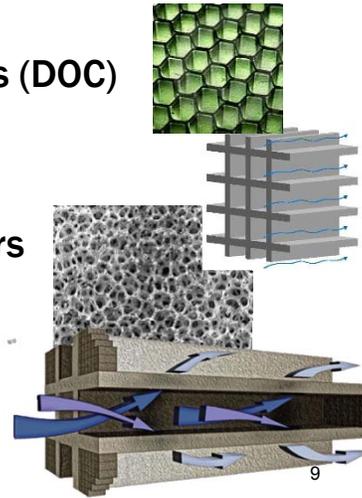
Diesel Risk Reduction Plan

- ARB identified Diesel PM as Toxic 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

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Verified Diesel Emission Control Strategies (VDECS) for Particulate Matter

- Level I Devices
 - Diesel Oxidation Catalysts (DOC)
 - Monolith (25 – 49%)
- Level II Devices
 - Diesel Flow-Through Filters
 - Wire Mesh (50 – 84%)
- Level III Devices
 - Diesel Wall-flow Filters
 - Wall-Flow ($\geq 85\%$)



In-Use Off-road Diesel Vehicle Regulation

- Adopted on July 26, 2007, major revisions December 2010
- Will reduce 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

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Applicability

Who and What is Affected?



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Who is Affected?

- Businesses
- Individuals
- Government agencies

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What is Affected?

- Diesel and alternative diesel fueled vehicles (including biodiesel) that are:
 - Single-engine off-road vehicles
 - Operate within California
 - Self-propelled (no generators, etc.)
 - 25 horsepower or greater
- Oilfield & natural gas workover rigs
- Two-engine cranes and water well drilling rigs
- Certain other two-engine vehicles

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What is an Off-road Vehicle ?

- Vehicles intended to be used off-road
- Designed for off-road use, have off-road engines
- Cannot be registered to operate on-road regardless of use

NOT Off-Road:
On-road vehicle, even
if not currently licensed



Water truck

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Two-Engine Vehicles Subject to the Off-Road Regulation

- Auxiliary engine \geq 50 bhp
- Two-engine water-well drilling rigs and Two-engine cranes
 - Including those with Tier 0 engines
- Other types of two-engine vehicles
 - With certified auxiliary engine (Tier 1 - 4)
 - Fully integrated into design
 - Not subject to PAU Fleet Rule
 - Excludes two-engine sweepers

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Two-Engine Vehicles Subject to the Off-Road Regulation

- Both engines must be reported under the Off-Road reporting system (DOORS)
- Auxiliary engine may require PERP or local air district permit
 - Check with local district to see if required
 - Permit or registration fees
 - Meet current eligibility requirements
 - Auxiliary engine with both EIN and PERP
- Use FAQ and check with ARB if unsure

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Exemptions

Completely Exempt from Off-Road Regulation:

- Locomotives
- Marine engines (incl. commercial vessels)
- Recreational Vehicles
- Combat and tactical support equipment
- Personal use vehicles
- Two-engine street sweepers
- Equipment at ports or intermodal rail yards subject to mobile cargo handling rule

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Exemptions (con't.)

Exempt from all but recordkeeping, reporting and labeling:

- Low-use vehicles (used < 200 hrs/yr)
- Emergency vehicles
- Dedicated snow removal vehicles
- Equipment used a majority of the time for agricultural purposes (>50%)
 - 100% ag use equipment completely exempt

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Regulation Requirements



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Requirements Vary by Fleet Size

- Determine fleet size by adding up all horsepower subject to the regulation
 - Must include all horsepower under common ownership or control
- Exclude:
 - Low use vehicles (used < 200 hrs/year)
 - Emergency use vehicles
 - Dedicated snow removal vehicles
 - Vehicles used > 50% of the time for agricultural operations

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Fleet Size Categories

Fleet Size Category	Description
Small	Fleet <= 2,500 hp, or Municipality <= 2,500 hp, or Municipality fleet in low population* county, captive attainment area fleet, regardless of total hp
Medium	Fleet with 2,501 to 5,000 hp
Large	Fleet with more than 5,000 hp All state and federal government fleets

* Low population counties and fleets are listed online at:
<http://www.arb.ca.gov/msprog/ordiesel/lowpopulation.htm>

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Captive Attainment Area Fleets

- Fleets or fleet portions that operate only in listed attainment counties (clean air areas)
- Considered small fleets, regardless of total hp in fleet or fleet portion
- Fleets can travel within multiple attainment counties
- Optional provision, but if complying as a captive attainment area fleet, a fleet must:
 - Designate itself as a captive attainment area fleet in DOORS
 - Comply with the captive attainment area fleet labeling requirements - green label required

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Captive Attainment Area Fleets

Attainment 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, Trinity, Tehama, Yuba, and the portion of Sonoma County that lies within the boundaries of the North Coast Air Basin.

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Fleet Portions

- Fleet portions, or subsidiaries, can comply as many separate fleet portions
- Cannot be determined arbitrarily
 - Must be based separate: management, locations, organizational structure, etc.
 - Must be under parent company in DOORS
- If company is split into separate fleet portions, each portion must still follow the timeline determined by the overall company's fleet size (except for portions in captive attainment areas)

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Fleet Portion Example

- Example Company is large fleet (7,100 hp) comprised of 3 fleet portions:
 - Fleet A: 2,000 horsepower
 - Fleet B: 2,000 horsepower
 - Fleet C: 3,100 horsepower
- Compliance options:
 - Example company can comply as one large 7,100 hp fleet, or
 - Fleet A, B, and C (or any combination thereof) can comply as separate fleets, BUT, must meet the large fleet requirements/deadlines (because overall, Example Company is a large fleet)

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Rental and Leased Vehicles

- Rented/leased < 1 year
 - Owner's responsibility
- Rented/leased >= 1 year
 - Owner's responsibility, unless stated otherwise in contract
- Leases occurring before June 15, 2008
 - If in a year long "lease" (or more) starting on or before June 15, 2008, vehicle must be included in the lessee's fleet (not owner)

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Requirements Currently in Effect

- Limit on Idling
- Idling Policy
- Sales Disclosure
- Initial Reporting
- Labeling
- Annual Reporting & Recordkeeping

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5 Minute Limit on Idling

- Exemptions include:
 - Queuing, testing, and servicing
- Can apply to ARB Executive Officer (EO) to idle > 5 minutes
- Enforcement of 5 minute idling limit is in effect
 - issued to vehicle owner, not operator, except for rentals

- Enforcement Advisory:

www.arb.ca.gov/enf/advs/advs377.pdf

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Written Idling Policy

- Required for medium and large fleets only
- Policy must be available to all vehicle operators
- Guidance document for idling policy available at:

www.arb.ca.gov/msprog/ordiesel/knowcenter.htm

- Enforcement Advisory:

www.arb.ca.gov/enf/advs/advs391.pdf

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Disclosure of Applicability (Sales Disclosure)

- Disclosure of regulation to buyer
- Persons selling in California to California buyer
- Keep disclosure records for 3 years
- Not required for manufacturers selling to dealers
- Must be included on the bill of sale, invoice, or price quote
- Enforcement advisory:
<http://www.arb.ca.gov/enf/advs/advs378.pdf>

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Disclosure Language

“When operated in California, any off-road diesel vehicle may be subject to the California Air Resources Board In-Use Off-road Diesel Vehicle Regulation. It therefore could be subject to 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/msprog/ordiesel/ordiesel.htm>”

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Initial Reporting

- Reporting was required in 2009 for all vehicles subject to the regulation
- Report using the Diesel Off-road On-line Reporting System (DOORS)
 - On-line reporting tool
 - Compiles and reports fleet data
 - Meets ARB's off-road reporting requirements
 - Retains fleet data for future reporting
 - Enforcement staff can access data from DOORS

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DOORS Hotline:
(877) 59-DOORS
(866-593-6677)
doors@arb.ca.gov

Accessing DOORS

www.arb.ca.gov/ordiesel



https://ssl.arb.ca.gov/ssldoors/doors_reporting/doors_login.html

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Reporting Vehicle Additions/Removals

- Vehicles added or sold/retired must be reported to ARB within 30 days
 - Includes purchases/sales, or bringing vehicles in or out of CA
- Report vehicle additions/removals online through DOORS at:
https://ssl.arb.ca.gov/ssldoors/doors_reporting/doors_login.html
- Hardcopy forms also available

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Hard Copy Forms

- Fleets that prefer can request hard copy forms
- Fleets can call the DOORS hotline, or email doors@arb.ca.gov
- A fleet should leave their name, address, and contact phone number when requesting hard copy forms

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DOORS Reporting Help

- Contact the DOORS hotline!
 - Call the DOORS toll free hotline
877-59DOORS (877-593-6677)
 - Email the DOORS help team:
doors@arb.ca.gov
 - Assistance with DOORS and hardcopy forms
- Missed your reporting deadline? Act now to avoid or reduce penalties.
 - Small & medium fleets that self-report now will not be fined

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DOORS – Compliance Snapshot

The screenshot displays the DOORS web application interface. At the top, the header includes the California Environmental Protection Agency logo, the Air Resources Board logo, and navigation links for "Go to Off-Road Diesel Vehicle", "A | A | A", "Calendars", and "A-Z Index". Below the header, there is a search bar for the "Off-road Knowledge Center". The main content area shows the user's "DOORS ID: 16996" and "Name: SAMPLE FLEET". The interface is divided into three columns: "Choose a Fleet", "Choose an Option", and "Announcements / Quick Links". The "Choose a Fleet" column contains a list of fleet names, including "name133", "PARENT COMPANY", "SAMPLE FLEET", "Sample Large Family Child", "Sample Small Fleet", "sdfqsdfqfg", "Test - Akash Fleet1", "Test - Akash Fleet2 Child", "Test - Erin's Construction Company", "Test - Erin's Landscaping Company", "Test - L - Mix - BLE Early Retire", and "Test - L - Mix - BLE Multiple". The "Choose an Option" column contains several buttons: "Enter Stolen Vehicles", "Reassign Vehicle", "Aggregate Fleet", "Statistics Options", "ROAR Forms", "Other Annual Reporting Forms", "Compliance Certificate", "View FIN", "Compliance Snapshot" (highlighted with a red box), and "Log Out of DOORS". The "Announcements / Quick Links" column contains a "How to report:" section with a message: "The User Guides for DOORS are currently being updated and will return soon. In the meantime, please check The Knowledge Center for available updates". At the bottom of the page, there is a footer with the text: "Questions? Contact us: 1(877) 59-DOORS or doors@arb.ca.gov".

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Fleet Compliance Snapshot

Your current fleet has met the off-road regulation requirements through the January 1, 2015 compliance date.* However, you will need to take action prior to December 31, 2015 in order for your fleet to be in compliance on January 1, 2016.

*This determination is based on the make up of your CURRENT fleet in DOORS, which includes age and horsepower of engines, retrofits (if any), vehicles sold (credits, if any), exempt vehicles such as Low Use (if any), subfleets (if any), and other credits (if any).

Current Fleet Statistics

Fleet Size	Large
Number of Vehicles:	
In Fleet Average	21
Low Use	0
Exempt Not Low Use	0
Total Vehicles	21
Total Horsepower (in fleet average)	5,250
First Compliance Date	January 1, 2014
Next Required Compliance Date	January 1, 2016

Fleet Target and Average Emission Rates (g/bhp-hr)

Target Year	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Target	none	none	6.2	5.8	5.3	4.7	4.1	3.5	2.9	2.3	1.7	1.5
Average (current)	5.8											

As shown in green in the table above, your fleet average is less than or equal to the fleet target until 2016

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As shown in green in the table above, your fleet average is less than or equal to the fleet target until 2016

January 1, 2016 Requirements

Your Current Fleet Average 5.8

2016 Fleet Target 5.3

EXAMPLE of meeting the fleet target with turnover

Required BACT in 2016 420 HP (8.0% of Fleet Horsepower)

Current BACT Credit: 0 Hp

To be in compliance, the fleet average must be lower than or equal to the fleet target or meet BACT for each compliance year.

Calendar Year	BACT HP	Begin Credit	End Credit	Compliance Method
2014	na	0	0	met fleet average
2015	na	0	0	met fleet average

Credit Summary

Reference Regulation Section 2449.1(b)	These credits are provided in sections of the regulation cited in the right column. You may show or hide individual credit details by clicking the labels or Show All Credit Details	Horsepower Credit (Rounded)	
(13)	Early Repowers/Rebuilds	0	
(14)	Early Replacement	0	
(15)	Early VDECS Double Credit - Highest PM VDECS Credit	0	
	- NOx VDECS Credit	0	
(16)	Early Reduced Fleet HP (only to be used 2015 or after)	0	
(17)	2010-2011 Reduced Fleet HP	0	
(18)	Interim Replacement/Retirement	0	
(10)(A)	Turnover - Retirement - Repower / Rebuild (higher tier) - Permanent Low-Use	0 0 0	
	(10)(B)-(D)	VDECS - Highest level PM VDECS credit - NOx VDECS credit - NOx + Highest level PM VDECS credit	0 0 0
		(11)	Excess PM VDECS credit used for compliance with the off-road and truck and bus regulations - From Truck and Bus - Given to Truck and Bus
		Credit Total	0 Hp

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DOORS – Compliance Planning Tool

- Uses a fleet's information in DOORS to generate compliance plans
- Automated and manual compliance planning options
- Currently in the testing phase

Interested in testing the DOORS compliance planning tool? Let us know! doors@arb.ca.gov

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The screenshot displays the DOORS Compliance Planning Tool interface. At the top, there is a navigation menu with options: Home, **Fleet**, Strategy, Cost, Summary, Plan, Setup, and Exit. The header includes the California Environmental Protection Agency Air Resources Board logo and the text 'Go to Off-Road Diesel Vehicle'. Below the navigation, the interface shows the DOORS ID (46139), Name (Test - L - T0 - Freebie), Compliance Plan (46139_Plan_A), and Target Year (2016). There are several buttons for actions: Run All Years, Run Another Year, Recalculate Current Year, Start New Plan, and Show/Hide. A summary section displays Fleet Emissions Target (5.2), Current Emissions Average (7.4), Begin BACT Credit (504), Available BACT (504), Required BACT HP (560), and Ending BACT HP (0). Below this, there are checkboxes for showing or hiding columns in the vehicle table. The main table has columns for EIN, Owner ID, Vehicle type, Vehicle model year, Engine model year, HP, Engine Tier, and emissions data for years 2011 through 2016. The 2016 column is highlighted in red and labeled 'Non-compliant'. An 'Action' column is on the right, with a dropdown menu for each row. The table contains the following data:

EIN	Owner ID	Vehicle type	Vehicle model year	Engine model year	HP	Engine Tier	2011	2012	2013	2014	2015	2016	Action
MG6R34		Rubber Tired Dozers	1994	1994	700	T0							Auto
PH7V44		Rubber Tired Dozers	1994	1994	700	T0							Auto
BJ77199		Rubber Tired Dozers	1994	2007	700	T3							Stop Action
WCSX69		Rubber Tired Dozers	1994	2007	700	T3							Replace
HK3C64		Rubber Tired Dozers	1995	1995	700	T0							Repower
KJ3Y59		Rubber Tired Dozers	1995	1995	700	T0							Retire
LH5M89		Rubber Tired Dozers	1995	1995	700	T0							Retrofit
MD7F99		Rubber Tired Dozers	1995	1995	700	T0							YBY_Low_Use
													Perm_Low_Use

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Vehicle Labeling

- All vehicles subject to the regulation must be labeled
- ARB assigns Equipment Identification Number (EIN) after initial reporting
- Vehicles must be labeled within 30 days of receiving EIN
- EIN stays with vehicle for life (even after sales)



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Vehicle Labeling

- As of January 1, 2013:
 - BOTH sides of vehicles must be labeled
 - Captive attainment area fleets must have **green** labels
- Labels are not issued by ARB
- Labeling specifications:
www.arb.ca.gov/msprog/ordiesel/knowcenter.htm
- List of label vendors:
<http://www.arb.ca.gov/msprog/ordiesel/labelvendors.htm>

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Annual Reporting

- Annual reporting required:

Fleet Size	Annual Reporting (due by March 1 st of year)
Large	2012 - 2023
Medium	2016 - 2023
Small	2018 - 2028

- Responsible Official Affirmation of Reporting (ROAR)
 - First one was due by March 1, 2012 for large fleets!
- Hour meter readings
 - Vehicles reported as low-use
 - Vehicles used a majority of time for agricultural operations
- Changes since initial reporting

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Record Keeping

- Records must be kept between reporting periods:
 - Changes in the fleet since last reported
 - Newly purchased vehicles
 - Rebuilt engines
 - VDECS that have failed
 - VDECS serial numbers
 - Manufacturer delays
 - Executive Officer approvals for extensions, approval of alternative fuels, idling exceptions, etc.
- Records must be kept until the vehicle is retired, or 2030 (whichever is earlier)

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Future Requirements

- Restrictions on adding vehicles
- Performance requirements (to reduce emissions)
 - Turnover to cleaner engines/vehicles; and/or
 - Install highest level VDECS

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Restrictions on Adding Vehicles

- **Restrictions begin when U.S. EPA authorization granted**
 - ARB will send out notice to fleets in DOORS
- Ban on adding Tier 0s and unregistered Tier 1s
 - Begins when authorization is granted
 - “Unregistered” means those Tier 1s not in DOORS by January 1, 2012.
- Ban on adding Tier 1s
 - Begins 2013 for large and medium fleets, 2016 for small fleets
- Ban on adding Tier 2s
 - Begins 2018 for large and medium fleets, 2023 for small fleets

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Restrictions on Adding Vehicles

Lowest Tier That Can Be Added To A Fleet

Fleet Size	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Medium/Large	T1*	T2					T3					
Small	T1				T2						T3	

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Performance Requirements

- Must be met by January 1st of compliance year
- Must meet one of the below options:
 - Fleet average requirements
 - Best Available Control Technology (BACT) requirements

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

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Fleet Averaging Requirements

- Compare fleet average index to fleet average target
 - DOORS shows this in Compliance Snapshot
- Index/target are horsepower weighted averages of NO_x emissions (g/bhp-hr)
- Targets get more stringent with time
- One set of targets for large/medium fleets, a separate set for small fleets
- Example calculations located at the end of this presentation

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Fleet Average Targets

Large and Medium Fleets Only

Compliance Date: January 1 of Year	25-49 hp	50-74 hp	75-99 hp	100-174 hp	175-299 hp	300-599 hp	600-750 hp	>750 hp
2014 (Large Fleets Only)	5.8	6.5	7.1	6.4	6.2	5.9	6.1	7.2
2015 (Large Fleets Only)	5.6	6.2	6.7	6	5.8	5.5	5.6	6.8
2016 (Large Fleets Only)	5.3	5.8	6.2	5.5	5.3	5.1	5.2	6.5
2017	5.0	5.4	5.5	4.9	4.7	4.5	4.6	6.0
2018	4.7	5.0	4.8	4.3	4.1	4.0	4.0	5.5
2019	4.4	4.6	4.1	3.7	3.5	3.4	3.4	5.0
2020	4.1	4.2	3.4	3.1	2.9	2.8	2.9	4.5
2021	3.8	3.8	2.7	2.5	2.3	2.2	2.3	4.0
2022	3.5	3.4	2.0	1.9	1.7	1.7	1.7	3.5
2023	3.3	3.0	1.4	1.3	1.5	1.5	1.5	3.4

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Fleet Average Targets

Small Fleets Only

Compliance Date: January 1 of Year	25-49 hp	50-74 hp	75-99 hp	100-174 hp	175-299 hp	300-599 hp	600-750 hp	>750 hp
2019	5.8	6.5	7.1	6.4	6.2	5.9	6.1	7.2
2020	5.6	6.2	6.7	6.0	5.8	5.5	5.6	6.8
2021	5.3	5.8	6.2	5.5	5.3	5.1	5.2	6.5
2022	5.0	5.4	5.5	4.9	4.7	4.5	4.6	6.0
2023	4.7	5.0	4.8	4.3	4.1	4.0	4.0	5.5
2024	4.4	4.6	4.1	3.7	3.5	3.4	3.4	5.0
2025	4.1	4.2	3.4	3.1	2.9	2.8	2.9	4.5
2026	3.8	3.8	2.7	2.5	2.3	2.2	2.3	4.0
2027	3.5	3.4	2.0	1.9	1.7	1.7	1.7	3.5
2028	3.3	3.0	1.4	1.3	1.5	1.5	1.5	3.5

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Emission Factors

- Emissions are based on the engine model year, not vehicle year.
- Model year determined by looking at emission control label for certified engines
- Emission factors for diesel off-road engines listed in the Regulation (Appendix A)
- For on-road and alt-fuel engine emission factors, please contact off-road staff
- Flex engines use the same emission factor as a regular certified engine (model year)

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Emission Factors*

Emissions Factors by Horsepower and Year (g/bhp-hr)								
Year	Horsepower Groups							
	25-49	50-74	75-99	100-174	175-299	300-599	600-750	750+
1900	7.2	14.8	14.8	15.9	15.9	15.2	15.2	15.2
1969	7.2	14.8	14.8	15.9	15.9	15.2	15.2	15.2
1970	7.2	14.8	14.8	14.8	14.8	14.1	14.1	14.1
1972	7.2	14.8	14.8	13.6	13.6	13.0	13.0	13.0
1980	7.2	14.8	14.8	12.5	12.5	11.9	11.9	11.9
1988	7.1	9.9	9.9	9.3	9.3	8.9	8.9	8.9
1989	7.1	9.9	9.9	9.3	9.3	8.9	8.9	8.9
1996	7.1	9.9	9.9	9.3	6.9	6.9	6.9	8.9
1997	7.1	9.9	9.9	6.9	6.9	6.9	6.9	8.9
1998	7.1	6.9	6.9	6.9	6.9	6.9	6.9	8.9
1999	6.2	6.9	6.9	6.9	6.9	6.9	6.9	8.9
2000	6.2	6.9	6.9	6.9	6.9	6.9	6.9	6.9
2001	6.2	6.9	6.9	6.9	6.9	4.2	6.9	6.9
2002	6.2	6.9	6.9	6.9	6.9	4.2	4.2	6.9

* Only partial chart shown

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Best Available Control Technology (BACT) Requirements

- Option for fleets in lieu of meeting the fleet average targets
- Fleet must turn over or install VDECS on a certain percent (BACT rate) of fleet horsepower each year
- Must apply BACT to Tier 0/1 vehicles first
- Actions must be completed before January 1st of compliance year

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Best Available Control Technology (BACT) Requirements

- Turnover:
 - Retire
 - Designate permanently low-use
 - Repower with cleaner engine
 - Rebuild to a more stringent emission standard
- VDECS:
 - Highest level PM VDECS
 - NOx VDECS

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BACT Compliance Rates

Large Fleets

Year	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
BACT Rate	4.8%	8%	8%	8%	10%	10%	10%	10%	10%	10%

Medium Fleets

Year	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
BACT Rate	-	-	-	8%	10%	10%	10%	10%	10%	10%

Small Fleets

Year	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
BACT Rate	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%

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Exemptions from BACT Requirements – Large/Med Fleets

- Vehicles less than 10 years old
- Specialty vehicles if certain criteria are met
- Highest level PM VDECS installed in past 6 years
 - Highest level at time of installation
- Vehicle has OEM diesel particulate filter
- Tier 4 or Tier 4 Interim vehicles
- Highest level PM VDECS installed before January 1, 2013
 - Can only apply to 15% of 12/31/12 total hp

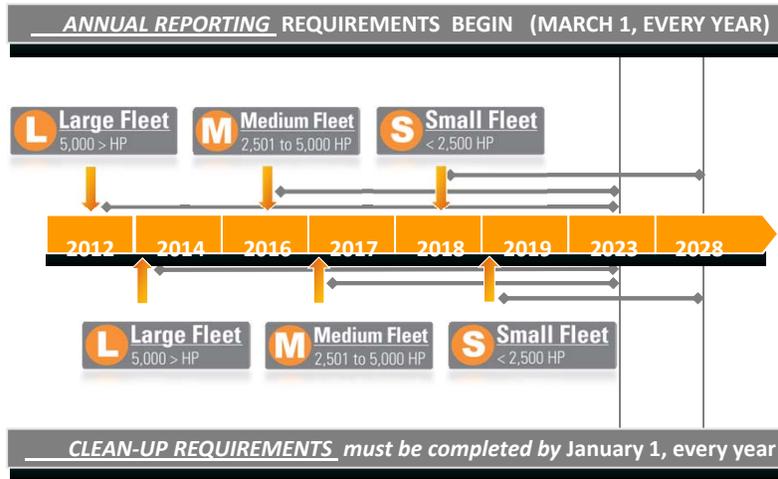
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Exemptions from BACT Requirements – Small Fleets

- Vehicles less than 10 years old
- Specialty vehicles if certain criteria are met
- No highest level VDECS available 10 months prior to compliance date
- Vehicle has OEM diesel particulate filter
- Tier 4 or Tier 4 Interim vehicles
- Highest level PM VDECS installed available at time of installation

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Compliance Timeline



Other Provisions



Alternative Compliance Option for Smallest Fleets

- Optional path (i.e., not required)
- For small fleets with less than 500 hp (must include vehicles exempt from performance requirements i.e. low-use, emergency-use, etc.)
- Phase out Tier 0 and 1 vehicles

Compliance Date: January 1 of Year	Percent of Fleet (by horsepower) Which Must Have a Tier 2 or Higher Engine
2019	25
2022	50
2026	75
2029	100

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Low-use Vehicle Exemption

- Must be operated < 200 hours/yr
- Equipped with non-resettable hour meter
- For two-engine vehicles, both engines must be used < 200 hours/yr
- Year-by-year low use vehicle
 - If used > 200 hours entered into fleet average
 - Must show < 200 hours for previous year
- Permanent low use vehicle
 - BACT credit for these vehicles
 - May never exceed 200 hours (violation)
 - If >200 hrs/yr, then meet vehicle adding limits

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Early Credits – Available NOW!

- Full credit given for previous repowers
- Some credit given for fleets that have reduced their total horsepower, or replaced vehicles
- Double credit deadline for PM and NOx exhaust retrofits:
 - Large fleets: January 1, 2013
 - Medium fleets: January 1, 2016
 - Small fleets: January 1, 2018

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Compliance Extensions

- No penalties for manufacturer delays of new equipment
 - Includes VDECS
 - Includes installation delays
 - Proof of purchase by Nov. 1st before compliance year
- ARB will grant extensions for delays in availability of Tier 3/4 vehicles

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New and Out-of-State Fleets

- All vehicles operating in California, even those owned by an out-of-state company, must comply with the regulation
- If a new fleet forms or enters California after January 1, 2012, they must meet the fleet average targets and adding vehicle restrictions immediately upon entering the state
 - Stricter than for current in-state fleets
 - In effect once U.S. EPA authorization is granted
- All vehicles newly purchased or brought into California must be reported to ARB within 30 days of purchase or entry into the State

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Resources and Contact Information



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Air Resources Board Financial Incentive Programs

- Funding may be available for the following:
 - Vehicle replacements
 - Engine retrofits
 - Engine repowers
 - Engine hybrid technologies

- Carl Moyer Funding

www.arb.ca.gov/msprog/moyer/moyer.htm

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Knowledge Center

The screenshot shows the California Environmental Protection Agency Air Resources Board website. The main heading is "In-Use Off-Road Diesel Vehicle Regulation". Below the heading, there are three yellow buttons: "Knowledge Center Overview, Answers, Fact Sheets" (circled in red), "DOORS Reporting Forms", and "Regulation Language". To the right of these buttons are two blue buttons: "Exhaust Retrofits" and "Retrofit Safety & Exemptions". Below the buttons, there is a paragraph of text: "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 call the diesel vehicle information hot line at (866) 6-DIESEL or (866) 634-3735." The phone number "(866) 6-DIESEL or (866) 634-3735" is circled in red. Below this paragraph is a section titled "Enforcement Delayed" with a date "Posted September 30, 2011".

www.arb.ca.gov/ordiesel

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California Environmental Protection Agency
Air Resources Board

Home | Reducing Air Pollution | Air Quality | Business Assistance | Laws & Regulations | Health

Friday, June 15, 2012

Knowledge Center for the Off-Road Diesel Vehicle Regulation

This page last reviewed April 23, 2012

Search Off-road Knowledge Center

In December 2011, major amendments to the Off-Road Diesel Vehicle Regulation, which include delaying the first compliance date to no earlier than January 1, 2014, became effective. The changes to the regulation are reflected in the fact sheets, advisories, and answers to frequently asked questions below.

Fact Sheets

- Overview Fact Sheet: Basic explanation of the regulation timeline and requirements.
- December 2010 Amendments Fact Sheet: Summary of the off-road regulation as amended in December 2010.

Requirements in Effect Now - Enforcement and Regulatory Advisories

- Advisory 377: Limits on idling
- Advisory 378: Dealer/Seller Disclosure
- Advisory 391: Written Idling Policy
- Advisory 394: Reporting Vehicles
- Advisory 414: Enforcement Delay
- Advisory 12-02: Annual Reporting for Large Fleets Due March 1, 2012
- Advisory 12-02-B: Annual Reporting for 2-Engine On-Road Vehicles Due March 1, 2012
- Advisory 12-08: **New Labeling Requirements Effective January 1, 2013**

Frequently Asked Questions (FAQs)

Applicability

- Applicability Flow Chart: Determine if your vehicle is covered under the Off-Road Diesel Vehicle Regulation.
- General Applicability: Determine if your vehicles are exempt due to the personal use, snow removal, job corps, or other exemptions.

Monday, September 10, 2012

In-Use Off-Road Diesel Vehicle Regulation

This page last reviewed September 6, 2012

Knowledge Center
Overview, Answers, Fact Sheets

Exhaust Retrofits

DOORS Reporting Forms

Regulation Language

Retrofit Safety & Exemptions

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 call the diesel vehicle information hot line at (866) 6-DIESEL or (866) 634-3735.

Enforcement Delayed: On February 11, 2010, ARB issued a delay of the regulation's NOx and PM requirements pending further notice. Reporting, labeling, idling and disclosure requirements are still in effect. For more information, please see the enforcement advisory.

What's New?:

Posted September 6, 2012

- ARB staff is offering **Course 504: In-Use Off-Road Diesel Vehicle Regulation Training** at various locations throughout California on September 19, 2012, through November 6, 2012. This class will provide an overview of the Off-Road regulation, including the applicability, requirements, and the Diesel Off-Road Online Reporting System (DOORS). ARB staff will also be available after the class to answer individual questions. For more information on this class, including how to register, please see the course #504 website.

Posted July 9, 2012

- Many two-engine vehicles that were designed to be driven on-road are subject to the Off-Road Regulation and must be reported.** For more information see [Regulatory Advisory 12-02B](#).

Effective January 1, 2013, all in-use off-road vehicles will be required to have both sides of their vehicles labeled with Equipment Identification Numbers (EINs), and Captive Attainment Area Fleets will be required to label their off-road vehicles with EINs that are white with a green background. For more information see [Regulatory Advisory 12-08](#).

Posted February 16, 2012

RESOURCES

- Contact Us
- Join the Ordiesel Email list
- RSS Feeds

For More Information...

General Off-Road Regulation & Other Diesel Regulation Questions:

Diesel vehicle information hot line:

(866) 6-DIESEL

(866) 634-3735

Email: 8666diesel@arb.ca.gov

Off-Road Reporting (DOORS) Questions:

DOORS hot line:

(877) 59-DOORS

(866) 593-6677

Email: doors@arb.ca.gov

Websites:

Off-Road Regulation - www.arb.ca.gov/ordiesel

DOORS Reporting - https://ssl.arb.ca.gov/ssldoors/doors_reporting/doors_login.html

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Appendix: Example Fleet Average Calculations



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Steps in Calculating Fleet Average Index/Target

1. Determine which vehicles to include
2. Find emission factors
3. Calculate Fleet Average Index
4. Determine fleet targets
5. Calculate Fleet Average Target
6. Compare Index to Target

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1. Determine Which Vehicles to Include

Example Fleet:

Vehicle 1: MY 1996, 100 hp

Vehicle 2: MY 2000, 200 hp

Vehicle 3: MY 2002, 300 hp

Vehicle 4: MY 1998, 200 hp, low-use vehicle

Vehicle 5: MY 2001, 200 hp, emergency use

NO VDECS installed on any vehicle

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1. Determine Which Vehicles to Include

Example Fleet:

Vehicle 1: MY 1996, 100 hp

Vehicle 2: MY 2000, 200 hp

Vehicle 3: MY 2002, 300 hp

~~Vehicle 4: MY 1998, 200 hp, low use vehicle~~

~~Vehicle 5: MY 2001, 200 hp, emergency use~~

Low-use and emergency use vehicles don't count towards the fleet averages

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2. Find Emission Factors

- Emission Factor table located in Appendix A of the Off-Road regulation
- Use engine model year and horsepower to determine emission factor of vehicle
- From Emission Factor table:

Vehicle 1: 1996, 100 hp, EF = 9.3

Vehicle 2: 2000, 200 hp, EF = 6.9

Vehicle 3: 2002, 300 hp, EF = 4.2

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Emission Factors*

Emissions Factors by Horsepower and Year (g/bhp-hr)								
Engine Model Year	Horsepower Groups							
	25-49	50-74	75-99	100-174	175-299	300-599	600-750	750+
1900	7.2	14.8	14.8	15.9	15.9	15.2	15.2	15.2
1969	7.2	14.8	14.8	15.9	15.9	15.2	15.2	15.2
1970	7.2	14.8	14.8	14.8	14.8	14.1	14.1	14.1
1972	7.2	14.8	14.8	13.6	13.6	13.0	13.0	13.0
1980	7.2	14.8	14.8	12.5	12.5	11.9	11.9	11.9
1988	7.1	9.9	9.9	9.3	9.3	8.9	8.9	8.9
1989	7.1	9.9	9.9	9.3	9.3	8.9	8.9	8.9
1996	7.1	9.9	9.9	9.3	6.9	6.9	6.9	8.9
1997	7.1	9.9	9.9	6.9	6.9	6.9	6.9	8.9
1998	7.1	6.9	6.9	6.9	6.9	6.9	6.9	8.9
1999	6.2	6.9	6.9	6.9	6.9	6.9	6.9	8.9
2000	6.2	6.9	6.9	6.9	6.9	6.9	6.9	6.9
2001	6.2	6.9	6.9	6.9	6.9	4.2	6.9	6.9
2002	6.2	6.9	6.9	6.9	6.9	4.2	4.2	6.9

* Only partial chart shown

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3. Calculate Fleet Average Index

Fleet average index =

[SUM of (max hp for each engine in fleet multiplied by emission factor multiplied by the VDECS factor for each engine in fleet) for all engines in fleet] divided by [SUM of (max hp) for all engines in fleet]

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3. Calculate Fleet Average Index

Table 2 - VDECS Factor (section 2449.1(a))

VDECS	VDECS Factor
No VDECS Installed or Level 1 VDECS	1
Level 2 PM VDECS, not highest level	0.82
Level 2 PM VDECS, not highest level, with NOx reduction	1 Minus (0.18 + (Verified Percent NOx Reduction Divided by 170))
Highest Level PM VDECS	0.7
Highest Level PM VDECS with NOx Reduction	1 Minus (0.3 + (Verified Percent NOx Reduction Divided by 170))
NOx Reduction only	1 Minus (Verified Percent NOx Reduction Divided by 170)

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3. Calculate Fleet Average Index

No VDECS, so VDECS Factor = 1

Fleet average index =

$$= [(100 \times 9.3 \times 1) + (200 \times 6.9 \times 1) + (300 \times 4.2 \times 1)] / (100 + 200 + 300)$$

$$= [930 + 1380 + 1260] / 600$$

$$= 3570 / 600$$

$$= 5.95 \text{ (round to the nearest 0.1)}$$

$$= 6.0$$

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2. Determine Fleet Targets

- Different for each compliance year
- Target tables located in section 2449.1(a) of the Off-Road regulation
 - Table 3, for large and medium fleets
 - Table 4, for small fleets
- Use compliance year and engine horsepower to determine target rates for each vehicle
- From Fleet Target table:
 - Vehicle 1 (100 hp): 2014 target = 6.4
 - Vehicle 2 (200 hp): 2014 target = 6.2
 - Vehicle 3 (300 hp): 2014 target = 5.9

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4. Determine Fleet Targets

Large and Medium Fleet Targets Table

Compliance Date: January 1 of Year	25-49 hp	50-74 hp	75-99 hp	100-174 hp	175-299 hp	300-599 hp	600-750 hp	>750 hp
2014 (Large Fleets Only)	5.8	6.5	7.1	6.4	6.2	5.9	6.1	7.2
2015 (Large Fleets Only)	5.6	6.2	6.7	6	5.8	5.5	5.6	6.8
2016 (Large Fleets Only)	5.3	5.8	6.2	5.5	5.3	5.1	5.2	6.5
2017	5.0	5.4	5.5	4.9	4.7	4.5	4.6	6.0
2018	4.7	5.0	4.8	4.3	4.1	4.0	4.0	5.5
2019	4.4	4.6	4.1	3.7	3.5	3.4	3.4	5.0
2020	4.1	4.2	3.4	3.1	2.9	2.8	2.9	4.5
2021	3.8	3.8	2.7	2.5	2.3	2.2	2.3	4.0
2022	3.5	3.4	2.0	1.9	1.7	1.7	1.7	3.5
2023	3.3	3.0	1.4	1.3	1.5	1.5	1.5	3.4

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5. Calculate Fleet Average Target

Fleet average target =
[SUM of (max hp for each engine in fleet multiplied by the target for each engine in fleet) for all engines in fleet] divided by [SUM of (max hp) for all engines in fleet]

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5. Calculate Fleet Average Target

Fleet average target (for 2014) =
= [(6.4*100)+(6.2*200)+(5.9*300)]/(100+200+300)
= [640 + 1240 + 1770] / 600
= 3650 / 600
= 6.0833 (round to nearest 0.1)
= 6.1

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6. Compare Index to Target

Fleet average index = 6.0

Fleet average 2014 target = 6.1

$$\underline{6.0 < 6.1}$$

Since the fleet average index is less than the fleet average target for 2014, the fleet is in compliance

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Fact Sheets, Advisories, & Forms

In-Use Off-Road Diesel Vehicle Regulation

Overview, Revised May 2012



The Off-Road Regulation Applies To:

All self-propelled off-road diesel vehicles over 25 horsepower (hp) used in California and most two-engine vehicles (except on-road two-engine sweepers) are subject to the Regulation for In-Use Off-Road Diesel Fueled Fleets (Off-Road regulation). This includes vehicles that are rented or leased (rental or leased fleets).

Personal use vehicles, vehicles used solely for agriculture, vehicles that are awaiting sale, and vehicles already covered by the Regulation for Mobile Cargo Handling Equipment at Ports and Intermodal Rail Yards (Cargo Handling regulation), are exempt from the Off-Road regulation.

Emergency operations vehicles, dedicated snow removal vehicles, low-use vehicles (used under 200 hours per year, as confirmed by a non-resettable hour meter), and vehicles used a majority of the time (but not solely) for agricultural operations, must be reported to ARB and labeled, but are exempt from the performance requirements of the Off-Road regulation.

Summary:

The overall purpose of the Off-Road regulation is to reduce emissions of oxides of nitrogen (NO_x) and particulate matter (PM) from off-road diesel vehicles operating within California. The Off-Road regulation:

- Imposes limits on idling, requires a written idling policy, and requires a disclosure when selling vehicles;
- Requires all vehicles to be reported to ARB (using the Diesel Off-Road Online Reporting System, DOORS) and labeled;
- Restricts the adding of older vehicles into fleets; and
- Requires fleets to reduce their emissions by retiring, replacing, or repowering older engines, or installing Verified Diesel Emission Control Strategies, VDECS (i.e., exhaust retrofits).

The requirements and compliance dates of the Off-Road regulation vary by fleet size. For a fleet to determine their size, it must add up all of the off-road horsepower under common ownership or control in the fleet.

Fleet Size Category	Description
Small	Fleet or municipality <= 2,500 hp, or Municipality fleet in low population county, captive attainment area fleet, or non-profit training center, regardless of total hp
Medium	Fleet with 2,501 to 5,000 hp
Large	Fleet with more than 5,000 hp, or All state and federal government fleets, regardless of total hp

Requirements Currently in Effect:

**Effective June, 2008
for All Fleets:
Idling and Disclosure**

The following requirements are in effect and being enforced:

Idling Limited to 5 Minutes – Fleets must limit their unnecessary idling to 5 minutes; there are exceptions for vehicles that need to idle to perform work (such as a crane providing hydraulic power to the boom), vehicles being serviced, or in a queue waiting for work.

More information – www.arb.ca.gov/enf/advs/advs377.pdf

Written Idling Policy – Medium and large fleets must have a written idling policy.

More information - www.arb.ca.gov/enf/advs/advs391.pdf

Suggested language - www.arb.ca.gov/msprog/ordiesel/faq/idlepolicyfaq.pdf

Disclosure for Selling Vehicles – The seller (whether a dealer or a contractor with just one vehicle) must provide disclosure of the Off-Road regulation (exact language provided in the regulation) on the bill of sale or invoice, and must keep records that the disclosure was provided for three years after the sale. The seller must also report the vehicle sale to ARB via DOORS within 30 days of the sale.

More information and necessary language - www.arb.ca.gov/enf/advs/advs378.pdf

**Effective 2009
for All Fleets:
Reporting and Labeling**

The following requirements are in effect and being enforced:

Reporting – Reporting can be completed using DOORS, which is ARB's free online reporting tool for the Off-Road regulation. Additionally, hard copy reporting forms are also available.

Off-Road regulation homepage: www.arb.ca.gov/ordiesel

More information on how to report and what information is required is available on the DOORS website at:

https://ssl.arb.ca.gov/ssldoors/doors_reporting/doors_login.html

Labeling – After a fleet reports their vehicles to ARB, each vehicle is assigned a unique Equipment Identification Number (EIN). The fleet must label its vehicles within 30 days of receiving EINs. Note that ARB does not issue EIN labels; it is the fleet’s responsibility to follow ARB’s label specifications and to make or purchase the labels or placards, or paint the EINs on its vehicles. More information on label specifications is available at:

www.arb.ca.gov/msprog/ordiesel/faq/faq-labeling.pdf

A list of label vendors is available at:

www.arb.ca.gov/msprog/ordiesel/labelvendors.htm

Previously, fleets were only required to label the right (starboard) side of the vehicle. However, the labeling provisions of the Off-Road regulation were amended in December 2010 to require labels on both sides of each vehicle. Additionally, fleets reported as ‘captive attainment area fleets’ must have labels with a green background instead of red. Fleets have until January 1, 2013, to implement both of these changes.



More information on these labeling amendments is available at:

<http://www.arb.ca.gov/msprog/mailouts/msc1208/msc1208.pdf>

Annual Reporting – All fleet owners must review and update their information by March 1st each year that annual reporting is required. Large fleets must report annually from 2012 to 2023, medium fleets from 2016 to 2023, and small fleets from 2018 to 2028. For each annual reporting date, a fleet must report any changes to the fleet, hour meter readings (for low-use vehicles and vehicles used a majority of the time, but not solely, for agricultural operations), and also must submit the Responsible Official Affirmation of Reporting (ROAR) form. All of these items should be submitted using DOORS.

Future Requirements:

**Future Requirements
for All Fleets:
Restrictions on Adding
Vehicles**

In the future, there will be restrictions on adding older vehicles to a fleet. However, at this time, a fleet may purchase a vehicle with any tier engine.

Off-Road regulation homepage: www.arb.ca.gov/ordiesel

ARB is not currently enforcing the Off-Road regulation's restrictions on fleets adding vehicles with older tier engines, but will enforce this provision once authorization is received from the United States Environmental Protection Agency (U.S. EPA).

Ban on adding Tier 0s – Effective upon the U.S. EPA issuing authorization for the Off-Road regulation, a fleet may not add a vehicle with a Tier 0 engine to its fleet. The engine tier must be Tier 1 or higher.

Ban on adding Tier 1s – Also effective upon U.S. EPA authorization, large and medium fleets may add a vehicle with a Tier 1 engine if and only if the vehicle has an EIN that ARB assigned to the vehicle prior to January 1, 2012, and both the fleet selling and the fleet purchasing the vehicle have reported to ARB by January 1, 2012, or have entered the State of California for the first time after January 1, 2012. Beginning on January 1, 2013, for large and medium fleets, and January 1, 2016, for small fleets, a fleet may not add any vehicle with a Tier 1 engine. The engine tier must be Tier 2 or higher.

Ban on adding Tier 2s – Beginning January 1, 2018, for large and medium fleets, and January 1, 2023, for small fleets, a fleet may not add a vehicle with a Tier 2 engine to its fleet. The engine tier must be Tier 3 or higher.

Please refer to the Off-Road regulation website for updates regarding ARB's authorization request (www.arb.ca.gov/ordiesel).

More information on the adding vehicles requirements is available at: <http://www.arb.ca.gov/msprog/ordiesel/faq/addingvehicles.pdf>

**Future Requirements
for all Fleets:
Performance
Requirements**

**The performance requirements begin:
January 1, 2014, for large fleets
January 1, 2017, for medium fleets
January 1, 2019, for small fleets**

Compliance Options – By each compliance deadline, a fleet must demonstrate that it has either met the fleet average target for that year, or has completed the Best Available Control Technology requirements (BACT). Large fleets have compliance deadlines each year from 2014 through 2023, medium fleets each year from 2017 through 2023, and small fleets each year from 2019 through 2028. These requirements are described further below.

Meeting the fleet average targets – The fleet average index is an indicator of a fleet’s overall emissions rate, and is based on the fleet’s average NOx emissions which is determined by the horsepower and model year of each engine in the fleet. If the fleet average index is equal to or less than the fleet average target for a given year, the fleet is not required to take further action to reduce emissions from its vehicles.

OR

Complying with BACT requirements – If a fleet cannot, or does not want to meet the fleet average target in a given year, it may instead choose to comply with the BACT requirements. A fleet may meet the BACT requirements each year by turning over or installing VDECS on a certain percentage (referred to as the BACT rate) of its total fleet horsepower. ‘Turnover’ means retiring a vehicle, designating a vehicle as permanent low-use (a vehicle used less than 200 hours per year), repowering a vehicle with a higher tier engine, or rebuilding the engine to a more stringent emission standard. ‘Installing VDECS’ means installing the highest level VDECS verified by ARB to reduce PM, or installing a VDECS verified to reduce NOx. In order to fulfill the BACT requirements for large and medium fleets, if a VDECS cannot be installed on a vehicle, then that vehicle must be turned over. However, for small fleets, if a VDECS cannot be installed, that vehicle is exempt from the BACT requirements. The BACT rates for each fleet size are shown the below.

<p>Large fleets: 2014: 4.8 percent 2015 to 2017: 8 percent 2018 to 2023: 10 percent</p> <p>Medium fleets: 2017: 8 percent 2018 to 2023: 10 percent</p> <p>Small fleets: 2019 to 2028: 10 percent</p>

Additional Compliance Option for Fleets with 500 Hp or Less – Small fleets with 500 hp or less may comply with the small fleet requirements listed above, or may comply with an optional compliance path which requires the fleet to phase out Tier 0 and Tier 1 vehicles by 2029. This optional compliance schedule is shown in the table below.

Optional Compliance Schedule for Fleets with 500 HP or Less

Compliance Date: January 1 of Year	Percent of Fleet (by horsepower) Which Must Have a Tier 2 or Higher Engine
2019	25
2022	50
2026	75
2029	100

By 2029, all of the fleet's vehicles must have Tier 2 or higher engines. If small fleets with 500 hp or less choose not to pursue this compliance path, they must meet the small fleet requirements above.

Additional Information:

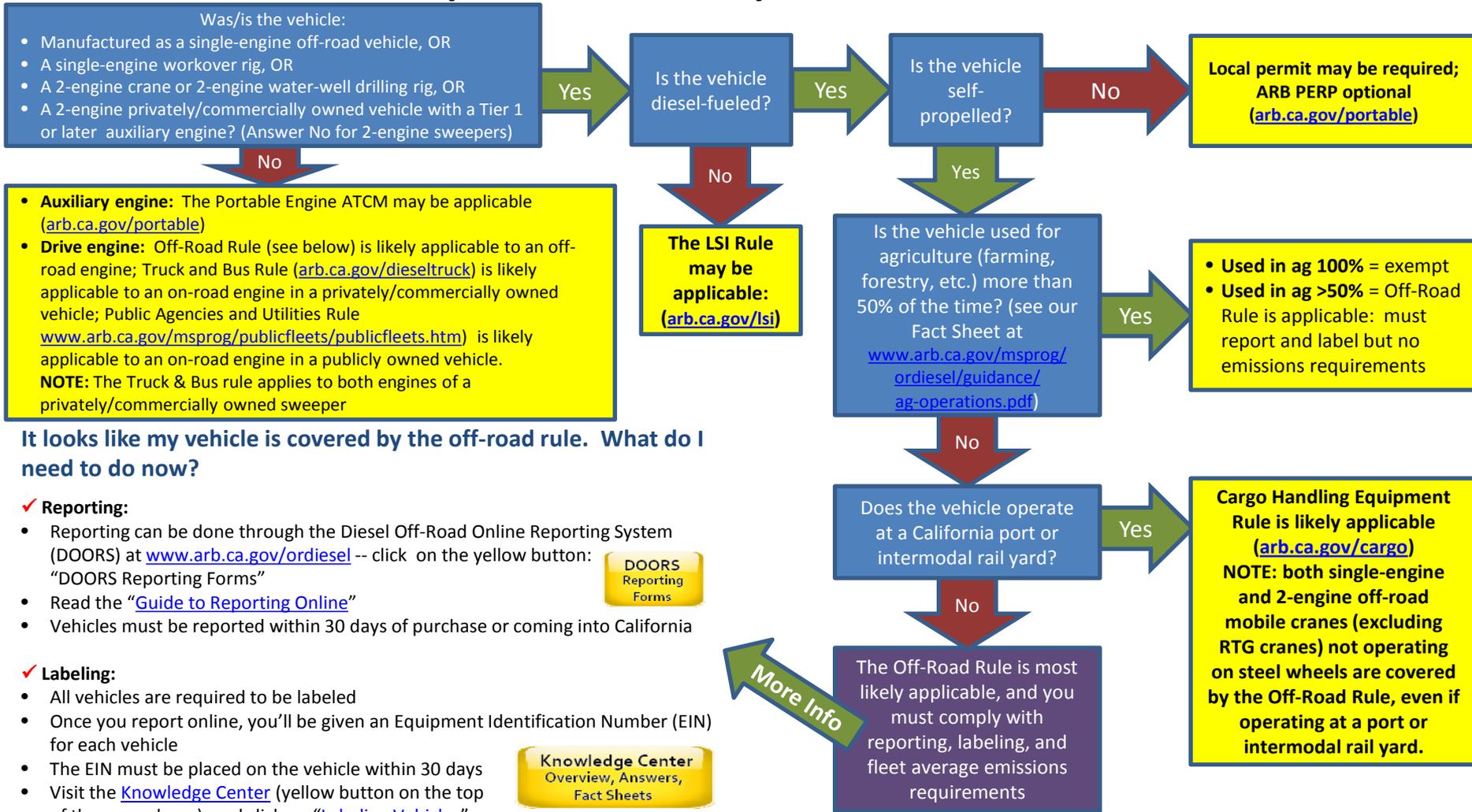
For more information on the Off-Road regulation, including Fact Sheets, Frequently Asked Questions (FAQs), and DOORS User Guides, please visit the Off-Road Knowledge Center at:

www.arb.ca.gov/msprog/ordiesel/knowcenter.htm

For assistance with Off-Road reporting or using ARB's Diesel Off-Road Online Reporting system (DOORS), please contact the DOORS hotline by phone at (877) 59DOORS (877-593-6677), or by email at doors@arb.ca.gov

For general questions regarding the Off-Road regulation, please contact the Diesel hotline by phone at (866) 6DIESEL (866-634-3735), or by email at 8666diesel@arb.ca.gov

Is My Vehicle Covered by the Off-Road Rule?



It looks like my vehicle is covered by the off-road rule. What do I need to do now?

✓ Reporting:

- Reporting can be done through the Diesel Off-Road Online Reporting System (DOORS) at www.arb.ca.gov/ordiesel -- click on the yellow button: "DOORS Reporting Forms"
- Read the "[Guide to Reporting Online](#)"
- Vehicles must be reported within 30 days of purchase or coming into California



✓ Labeling:

- All vehicles are required to be labeled
- Once you report online, you'll be given an Equipment Identification Number (EIN) for each vehicle
- The EIN must be placed on the vehicle within 30 days
- Visit the [Knowledge Center](#) (yellow button on the top of the page above), and click on "[Labeling Vehicles](#)"



✓ Idling:

- 5 minute idling limit
- Medium and large fleets must have a written idling policy
- Visit our [Idling Policy Guidance](#) in the Knowledge Center above.

✓ Disclosure of Applicability:

- Any person selling an off-road vehicle within California must provide disclosure writing to the buyer on the bill of sale stating that the vehicle is subject to the Off-Road Regulation. View the [advisory regarding disclosure requirements](#).



This chart is meant to cover most vehicle types. However, applicability may be different for more unique or special vehicles or configurations.

If you have questions or need help, call us toll-free at 1-866-634-3735

Information Required to Complete Initial Reporting

Since 2009, all owners of off-road diesel vehicles in California have been required to report their vehicle information to the Air Resources Board and then label their vehicles. The following information must be included in the report.

Owner and Contact Information

Information about the company or agency will be required prior to inputting vehicle information. You will be required to supply contact names and address (please use the mailing address), federal tax ID, a responsible company or agency officer or owner (Responsible Official),* Parent DOORS ID (if applicable),** and a few other pieces of information.

* “Responsible Official” means the **owner or partner** of a sole proprietorship or partnership, or a similar person who performs policy or decision-making functions for a corporation (i.e., **president, secretary, treasurer, vice president, or similar person in charge of a principal business function**). For a public agency, it means either a principal executive officer or ranking elected official (i.e., **chief executive officer** responsible for the overall operations of a principal geographic unit of the agency).

** A “Parent DOORS ID” is required when reporting fleet portions or for State and federal agencies. Federal agencies must report a Parent DOORS ID of 9 and State agencies must report a Parent DOORS ID of 10. For more information on fleet portions, please see our “Fleet Portions” Frequently Asked Questions (FAQ) guide which is available in the Knowledge Center at:

<http://www.arb.ca.gov/msprog/ordiesel/knowcenter.htm>.

Vehicle and Engine Information

The following information will be required for each vehicle and engine:

Vehicle Information	Engine Information
Vehicle Serial Number	Engine Serial Number
Your Identifier (optional)	Engine Manufacturer
Type (from ARB’s list)	Engine Model
Vehicle Manufacturer	EPA Engine Family
Vehicle Model	Engine Model Year
Vehicle Model Year	Maximum Horsepower
	Displacement (liters)

Tier 0 vehicles will not have an engine family. ARB has also released a guide on how to report if you are missing some of the information listed above, available on our reporting homepage:

https://ssl.arb.ca.gov/ssldoors/doors_reporting/doors_login.html

Special Circumstances

If the vehicle falls under any of the following categories, additional information will be required.

- Vehicles with verified exhaust retrofits installed
- Low use, emergency use, part-time agriculture use, snow removal vehicles
- Vehicles involved in Carl Moyer, Showcase, SOON, or other incentive funding programs
- Demonstration vehicles, or vehicles awaiting sale
- Non-diesel vehicles or systems being claimed for credit towards the off-road diesel regulation
- Engines with non-standard emissions certifications
- Vehicles sold for early retirement credit
- Captive attainment area fleets, or municipal fleets in low population counties
- Vehicle is a two-engine vehicle subject to the Off-Road Regulation.

For more information on reporting, refer to our DOORS user guides, which are available in the Off-road Knowledge Center at:

<http://www.arb.ca.gov/msprog/ordiesel/knowcenter.htm>

If you require additional assistance or information, please contact the DOORS hotline by phone at 877-59DOORS (877-593-6677) or by email at

doors@arb.ca.gov.



Regulatory Advisory



February 2012

Off-Road Regulation Advisory 12-02-B

ON-ROAD VEHICLES WITH TWO ENGINES MUST REPORT BY MARCH 1, 2012

In December 2011, the In-Use Off-Road Diesel Vehicle regulation was modified to include most diesel vehicles with two engines, whether they were designed to be driven on- or off-road. This means such vehicles are now required to report to the State Air Resources Board (ARB), and meet performance requirements contained within that regulation.

The ARB's regulation for In-Use Off-Road Diesel Vehicles became effective under California law on June 15, 2008. This regulation is intended to reduce harmful emissions from diesel powered vehicles operating in California. Among other things, fleet owners are subject to accelerated replacement/repower requirements, as well as restrictions on unnecessary idling.

Two-engine vehicles must be reported by March 1, 2012:

Diesel on-road vehicles with two-engines must be initially reported by March 1, 2012. The reporting system to use is the Diesel Off-road Online Reporting System (DOORS) at https://ssl.arb.ca.gov/ssldoors/doors_reporting/doors_login.html. Instructions regarding reporting are available in the Off-Road Knowledge Center at <http://www.arb.ca.gov/msprog/ordiesel/knowcenter.htm>.

Two-Engine On-Road Vehicles Are Subject to the Requirements of the Off-Road Regulation:

The following two-engine vehicles and their engines are subject to the requirements of the off-road regulation and hence must be reported to ARB no later than March 1, 2012:

- 1) All two-engine cranes,
- 2) Two-engine water-well drilling rigs that contain an auxiliary engine having a rated brake hp of 50 or greater (≥ 50 bhp),
- 3) Both engines of two-engine vehicles that were designed to be driven either on-road or off-road and contain an auxiliary engine ≥ 50 bhp are subject to this regulation provided that:
 - (a) The two-engine vehicle is not already subject to the Fleet Rule for Public Agencies and Utilities;
 - (b) The two-engine vehicle is not a two-engine on-road sweeper; and
 - (c) The two-engine vehicle does not have a Tier 0 auxiliary engine.

Two-engine cranes and two-engine water-well drilling rigs have been subject to the off-road regulation for years. The latest regulation changes added nearly all other two-engine on-road vehicles. Some examples of on-road trucks that may have two engines and that will hence be newly subject to the off-road regulation are cement mixers, cement pump trucks, and drilling rigs.

Fleets that have not yet reported and are found to be in violation by enforcement personnel before they report themselves will be subject to enforcement action, including fines. Health and Safety Code, Sections 39674 (a) and (b) authorize civil penalties for the violation of the programs for the regulation of toxic air contaminants not to exceed **one thousand dollars or ten thousand dollars respectively for each day in which the violation occurs, which can be applied to each vehicle that is not reported.**

For More Information

For information about the Off-road regulation, including the regulation language, visit the website at: www.arb.ca.gov/ordiesel. The Knowledge Center at <http://www.arb.ca.gov/msprog/ordiesel/knowcenter.htm> contains many guidance documents which explain the regulation. For questions regarding off-road reporting, you may contact the DOORS hotline at (877) 59-DOORS [(877) 593-6677] or by email at doors@arb.ca.gov. For general questions about diesel regulations, you may contact the Diesel hotline at (866) 6-DIESEL [(866) 634-3735].

Frequently Asked Questions In-Use Off-Road Diesel Vehicle Regulation

Two-Engine Vehicles FAQ June 2012

Q - What is considered a two-engine vehicle?

A - As stated in section 2449(c)(57) of the Off-Road regulation, a “two-engine vehicle” means a specially constructed on-road or off-road mobile diesel-powered vehicle that was designed by the original equipment manufacturer to be equipped with two diesel engines: one engine provides the primary source of motive power of the vehicle while the second engine is an auxiliary engine 50 brake horsepower (bhp) or greater that is permanently attached and integrated into the design of the vehicle to perform a specific function, which may include providing auxiliary power to attachments, performing special job functions, or providing additional motive power.

If a vehicle was originally designed with the capability to have an auxiliary engine installed, but the auxiliary engine was installed by someone else other than the original equipment manufacturer, the vehicle still qualifies as a two-engine vehicle under the definition above.

Q - What are some examples of vehicles defined as two-engine vehicles?

A - Some examples of two-engine vehicle types include the following:

- Augers (including those whereby the auxiliary engine provides additional motive power)
- Concrete Boom Trucks
- Concrete Mixers
- Concrete Pump Trucks
- Cranes: All Terrain, Hydraulic Truck, Conventional Truck
- Drill Rigs: Oil Drilling Rigs, Water-Well Drilling Rigs, Work-Over Rigs
- Guardrail Fence Installers
- Trenchers
- Vacuum Pump Trucks

The photographs below show some common examples of on-road and off-road two-engine vehicles with auxiliary engines that are permanently attached and integrated into the design of the vehicle (some diesel-powered auxiliary engines are used to provide motive power).

While this document is intended to assist fleet owners with their compliance efforts, it is the sole responsibility of fleet owners to ensure compliance with the In-Use Off-Road Diesel Vehicle Regulation.

Post hole digger: auger with an auxiliary-engine used for auxiliary and motive power



Concrete Boom Truck



Concrete Mixer (with two engines)



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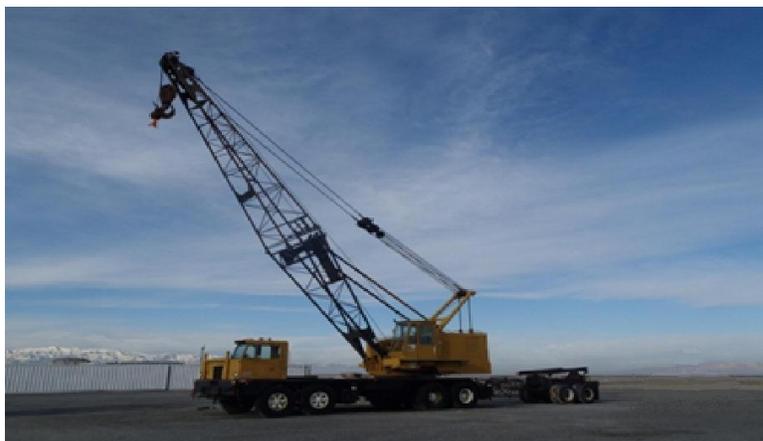
Concrete Pump Truck



All Terrain Crane



Conventional Truck Crane



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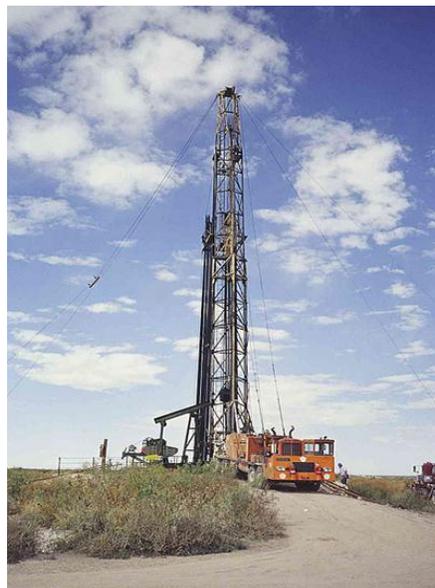
Hydraulic Truck Crane



Water-well Drilling Rig



Work-over Drilling Rig



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Guardrail Installer (Drop Hammer)



Water Truck



Trencher



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Vacuum Pump Truck



Q - Which vehicles do NOT qualify as two-engine vehicles under the Off-Road regulation?

A - On-road trucks with auxiliary engines that are not integrated into the design of the vehicle (such as the service trucks shown below), do NOT qualify as two-engine vehicles, and therefore are NOT subject to the Off-Road regulation.

Service truck with an air compressor run by 80 hp auxiliary engine



Service truck with auxiliary engine and set up for air hammer, or other equipment



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Q - What industries own two-engine vehicles?

A - Industries that own two-engine vehicles include but are not limited to the following:

- Aggregate
- Asphalt and Concrete
- Construction
- Drilling and Excavation
- Lifting and Material Handling
- Energy/Gas/Oil

Q - I have a vehicle that meets the definition of “two-engine vehicle” as provided above. What regulation(s) apply to this vehicle?

A - The ARB has tried to limit the situations in which the two engines of a two-engine vehicle are subject to different regulations. In most cases, both engines of a two-engine vehicle are subject to the Off-Road regulation. However, there are exceptions to this general rule, and in some cases, the two engines of a two-engine vehicle may be subject to one or more of the following regulations: the In-Use Heavy-Duty Diesel-Fueled Vehicles Regulation (Truck and Bus regulation), the Fleet Rule for Public Agencies and Utilities (PAU regulation) and/or the Portable Diesel-Fueled Engines Airborne Toxic Control Measure (Portable ATCM). For example, two-engine sweepers are covered by the Truck and Bus regulation. A two-engine vehicle may be subject to one regulation that controls the emissions of both engines (i.e., the primary/drive engine and the secondary/auxiliary engine), or, it may be controlled by two separate regulations (one for the drive engine and one for the auxiliary engine). However, the number of vehicles now covered by two ARB regulations is expected to be small. Additionally, there may also be requirements by local air districts to permit the auxiliary engine of the two-engine vehicle (see the next question after the table).

There are several factors that determine which regulation will cover a two-engine vehicle, including:

- Vehicle type,
- Who owns the vehicle (public agency vs. private company), and
- The tier level of the auxiliary engine.

The table below summarizes the different types of two-engine vehicles and which Air Resources Board regulations apply to each type.

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Vehicle Type	Vehicle Definition	Vehicle Owner Type (Public or Private Fleet)	Auxiliary Engine Tier Level	Applicable Regulations
Two-engine crane (on-road OR off-road drive engine)	Off-Road regulation, section 2449(c)(56) “Two- engine crane” means a mobile diesel-powered machine with a hoisting mechanism mounted on a specially constructed truck chassis or carrier; one engine provides motive power, and a secondary (auxiliary) engine 50 bhp or greater that is used to lift and move materials and objects.	Public or Private	Any tier	Both engines: Off-Road regulation
Two-engine water-well drilling rig (on-road OR off-road drive engine)	Off-Road regulation, section 2449(c)(58) “Two-engine water-well drilling rig” means a mobile diesel-powered drilling rig owned by a water well drilling contractor with a current, valid C-57 license issued by the Contractors State License Board of California and used exclusively to drill water wells with a drilling mechanism mounted on a specialty constructed truck chassis or carrier; one engine provides motive power, and a secondary (auxiliary) engine 50 bhp or greater that is used to power the drilling mechanism.	Public or Private	Any tier	Both engines: Off-Road regulation
Two-engine street sweeper (with on-road drive engine) For two-engine street sweepers with off-road drive engines, please refer to “Other two-engine vehicles” below	Truck and Bus regulation, section 2025(d)(58) “Two-Engine Sweeper” means an on-road heavy-duty vehicle with a manufacturers GVWR greater than 14,000 lbs, used for the express purpose of removing material from road or other surfaces, by mechanical means through the action of one or more brooms, or by suction through a vacuum or regenerative air system or any combination of the above. A two-engine street sweeper has an engine to propel the vehicle and an auxiliary engine to power the broom or vacuum.	Privately owned	Any tier	Both engines: Truck and Bus regulation
		Publicly owned	Any tier	Drive engine: PAU regulation Auxiliary engine: Portable ATCM

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Vehicle Type	Vehicle Definition	Vehicle Owner Type (Public or Private Fleet)	Auxiliary Engine Tier Level	Applicable Regulations
<p>Two-engine dedicated snow removal vehicle (with on-road drive engine)</p> <p>For off-road drive engines, please refer to “Other two-engine vehicles” below</p>	<p>Off-Road regulation section 2449(c)(11) “Dedicated snow removal vehicle” means a vehicle that is operated exclusively to remove snow from public roads, private roads, or other paths from which snow must be cleared to allow on-road vehicle access. Dedicated snow removal vehicles must have permanently affixed snow removal equipment such as a snow blower or auger and may include, but are not limited to, motor graders, loaders, and snow blowers.</p>	Public or private	Any tier	<p>Drive engine: Exempt from ARB regulations</p> <p>Auxiliary engine: Exempt from ARB regulations (<u>unless</u> auxiliary engine is a detachable snow blower, then the Portable ATCM applies)</p>
<p>Two-engine authorized emergency vehicle (with on-road drive engine)</p> <p>For off-road drive engines, please refer to “Other two-engine vehicles” below</p>	<p>Truck and Bus regulation, section 2025(d)(9) “Authorized Emergency Vehicle” has the same meaning as California Vehicle Code section 165.</p>	Public or private	Any tier	<p>Drive engine: Exempt from ARB regulations</p> <p>Auxiliary engine: Portable ATCM</p>
<p>Other two-engine vehicles (on-road OR off-road drive engines)</p> <p>Does NOT include two-engine on-road trucks less than 14,000 GVWR</p>	<p>Off-Road regulation section 2449(c)(57) “Two-engine vehicle” means a specially constructed on-road or off-road mobile diesel-powered vehicle that was designed by the original equipment manufacturer to be equipped with two diesel engines: one engine provides the primary source of motive power of the vehicle while the second engine is an auxiliary engine 50 bhp or greater that is permanently attached and integrated into the design of the vehicle to perform a specific function, which may include providing auxiliary power to attachments, performing special job functions, or providing additional motive power.</p>	Publicly owned (with on-road drive engine)	Any tier	<p>Drive engine: PAU regulation</p> <p>Auxiliary engine: Portable ATCM</p>
		Publicly owned (with off-road drive engine)	Tier 0	<p>On-road drive engine: Truck and Bus regulation</p> <p>Off-road drive engine: Off-Road regulation</p> <p>Auxiliary engine: Portable ATCM</p>
		Privately owned (with on- or off-road drive engine)	Tier 1 or above	<p>Both engines: Off-Road regulation</p>

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Q – Do I still need a local air district permit or PERP registration for my auxiliary (upper) engine?

A – In addition to meeting the requirements of ARB regulations, most local air districts may require a permit for the operation of the auxiliary engine unless the engine is registered in ARB's Portable Equipment Registration Program (PERP). Therefore, you should contact the local district you plan to operate in to see if a permit is required (<http://www.arb.ca.gov/capcoa/roster.htm>). If you choose to register in PERP, you are required to remit applicable registration fees and display the PERP identification device (sticker and green placard) in addition to any vehicle identification labels that may be required under other ARB regulations. If registered under PERP, the owner/operator must also comply with the PERP inspection requirements. However, for auxiliary engines on two-engine vehicles subject to the Off-Road regulation, no additional recordkeeping or reporting is required beyond what is required under the reporting requirements of the Off-Road regulation. For more information about PERP, please see the PERP website at: www.arb.ca.gov/portable/portable.htm

Q - If both engines of my two-engine vehicle are now subject to a regulation other than the Portable ATCM (i.e., the Off-Road regulation or in the case of two-engine on-road sweepers, the Truck and Bus regulation) will I still need to meet the performance requirements of the Portable ATCM?

A - No. Formerly, the auxiliary engine of two-engine vehicles fell under the Portable ATCM. However, the auxiliary engines of two-engine vehicles that are now subject to the Off-Road and the Truck and Bus regulations have been exempted from the requirements of the Portable ATCM. Currently, both engines are required to comply respectively with the reporting, labeling, and performance requirements of the Off-Road and Truck and Bus regulations.

Q – Why are two-engine cranes and two-engine water-well drilling rigs treated differently from other two-engine vehicles?

A - Two-engine cranes and two-engine water-well drilling rigs were brought into the Off-Road regulation before the Tier 0 portable engine ban came into effect under the Portable ATCM. However, when the more recent modifications to the Off-Road regulation were made (which brought additional two-engine vehicles into the Off-road regulation), the Tier 0 engine portable engine ban was already in effect. To allow these additional two-engine vehicles with Tier 0 auxiliary engines to continue operating by making them subject to the Off-Road regulation would result in emissions disbenefits, and would also reward those fleet owners who did not comply with the Portable ATCM (i.e., the Tier 0 portable engine ban). Therefore, when the Off-Road regulation was amended in December 2010 to include a majority of two-engine vehicles, this provision specifically excluded two-engine vehicles with Tier 0 auxiliary engines.

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Q - I have a two-engine vehicle (that is not a crane or water-well drilling rig) that has a Tier 0 auxiliary engine. What regulations apply to that vehicle? Can that vehicle eventually be subject to the Off-Road regulation?

A - Since the auxiliary engine is a Tier 0, both engines will not be subject to the Off-Road regulation. Instead, you must look at the drive engine and auxiliary engines separately. The drive engine would be subject to the Truck & Bus, Off-Road, or Public Agencies & Utilities regulations, depending upon if the drive engine is an on-road engine, off-road engine, or an on-road engine owned by a local municipality. The auxiliary engine would be subject to the Portable ATCM, and local air district permitting requirements.

If the auxiliary engine is eventually repowered to a tier level that meets the Off-Road regulation's adding vehicles requirements, then both engines of the two-engine vehicle will then be subject to the Off-Road regulation.

Q - The auxiliary engine of my two-engine vehicle also provides motive power to the vehicle. What regulation(s) applies to this vehicle?

A - If the auxiliary engine is 25 hp or greater and provides motive power to the two-engine vehicle, that auxiliary engine is subject to the Off-road regulation and it is not subject to Portable ATCM.

For the drive engine, the applicability will depend on a few factors including the tier level of the auxiliary engine and if the vehicle is privately or publicly owned (please refer to the table above to determine applicability). However, in general, if the drive engine is an off-road engine, it most likely will fall under the Off-Road regulation.

Q - I have a two-engine vehicle that has an auxiliary engine less than 50 bhp. What regulation(s) applies to this vehicle?

A - A two-engine vehicle with an auxiliary engine less than 50 bhp does not meet the definition of two-engine vehicle in the Off-Road regulation. Therefore, the applicability chart provided in this document does not apply to these vehicles and instead a fleet must look at each engine individually to determine which regulation applies.

If the drive engine is an off-road engine, the Off-Road regulation will most likely apply; the Truck and Bus and PAU regulations will most likely apply for an on-road drive engine.

If the auxiliary engine is 25 hp or greater and provides motive power to the two-engine vehicle, that auxiliary engine is subject to the Off-road regulation and it is not subject to Portable ATCM. If the auxiliary engine does NOT provide motive power to the two-engine vehicle, then the Portable ATCM, PERP, and most district permitting programs do not apply.

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Q - I have a two-engine vehicle that is an on-road vehicle with a gross vehicle weight rating (GVWR) of less than 14,000 lbs. What regulation(s) applies to this vehicle?

A - The two-engine vehicle provisions of the Off-Road regulation do not apply to on-road vehicles that have a GVWR less than 14,000 lbs. Similarly, the Truck and Bus and PAU regulations only apply to vehicles with a GVWR greater than 14,000 lbs. Therefore, the drive engine would not be subject to either of the above regulations, however, the portable engine would be subject to the Portable ATCM and district permitting programs if it is 50 bhp or greater.

Q - I have a two-engine dedicated snow removal vehicle. What regulation(s) applies to this vehicle?

A - If the vehicle has two-engines (with an on-road drive engine) and meets the definition of “dedicated snow removal vehicle” (as listed in the table above), the drive engine of the vehicle is exempt from the Off-Road, Truck and Bus, and PAU regulations. If the drive engine is an off-road engine, then it is subject to the reporting and labeling requirements of the Off-Road regulation. The auxiliary engine of the two-engine dedicated snow removal vehicle is exempt from the Portable ATCM, unless the auxiliary engine is a detachable snow blower. If the snow blower is detachable (and is 50 bhp or greater), the auxiliary engine must comply with the Portable ATCM (the on-road drive engine would still be exempt).

Q - I have a two-engine vehicle that is an authorized emergency vehicle (as described in California Vehicle Code (Veh. Code) section 165). What regulation(s) applies to this vehicle?

A - If the two-engine vehicle meets the definition of an authorized emergency vehicle (as described in California Veh. Code section 165), then the on-road drive engine of that vehicle is exempt from the Off-Road, Truck and Bus, and PAU regulations. If the drive engine is an off-road engine, then it is subject to the reporting and labeling requirements of the Off-Road regulation. If the auxiliary engine is 50 bhp or greater, it must comply with the Portable ATCM.

Q - How do I report two-engine vehicles under the Off-Road regulation?

A – Fleets with two-engine vehicles covered under the Off-Road regulation must report both engines, but the vehicle will be assigned only one Equipment Identification Number (EIN). For more information on how to report two-engine vehicles, please see our DOORS User Guide on ‘How to Report Vehicles with Two (or More) Engines,’ which is available in the off-road Knowledge Center at: <http://www.arb.ca.gov/msprog/ordiesel/knowcenter.htm>

While this document is intended to assist fleet owners with their compliance efforts, it is the sole responsibility of fleet owners to ensure compliance with the In-Use Off-Road Diesel Vehicle Regulation.

- Q – Can a two-engine vehicle covered under the Off-Road regulation be considered a low use vehicle if only one engine is low use? For example, what if the auxiliary engine is used less than 200 hours per year, but the drive engine is used more often?**
- A – No. In order to be considered a low use vehicle, both engines of a two-engine vehicle must meet the low-use criteria provisions, that is, both engines must operate less than 200 hours annually. For more information on the low-use provisions of the off-road regulation, please see the Low-Use FAQ which is available in the off-road Knowledge Center at: www.arb.ca.gov/msprog/ordiesel/knowcenter.htm
- Q – The drive engine of my on-road two-engine vehicle is an off-road engine. I want to repower that engine, can I repower it with another off-road engine?**
- A – If an on-road registered vehicle with an off-road engine is repowered, and will be registered and driven on-road, it must be repowered with an on-road certified engine of the same model year or newer as the engine being replaced. Therefore, the drive engine of an on-road two-engine vehicle can be repowered with an off-road engine only if it will not be registered or driven on-road. For more information about on-road vehicles with off-road engines, please see the advisory available at: www.arb.ca.gov/enf/advs/advs381.pdf.
- Q – I have a two-engine vehicle, and want to retrofit the auxiliary engine only. Does this make the entire vehicle eligible for the BACT exemption if the installation is done before January 1, 2013? Does it make the vehicle eligible for a six-year delay before turnover is required?**
- A – Section 2449.1(b)(2)(E) of the regulation allows large and medium fleets to claim an exemption from future BACT requirements for a vehicle if the vehicle is equipped with the highest level PM VDECS available at the time of installation (all subsequent references to “highest level PM VDECS available” means at the time of installation) prior to January 1, 2013. This exemption is capped at 15 percent of the horsepower in the fleet as of December 31, 2012. For vehicles in large and medium fleets that do not qualify for the above exemption, the regulation also provides that vehicles in large and medium fleets are exempt from the regulation’s BACT requirements for six years from the date that they have been retrofitted with the highest PM VDECS available. Vehicles in small fleets that have been retrofitted with the highest level PM VDECS available are permanently exempt from the BACT requirements. (See sections 2449.1(b)(2)(C) and (3)(C), respectively).

With regard to two-engine vehicles, if VDECS exist for both the drive and auxiliary engines, then BOTH engines must be retrofitted with the highest level PM VDECS available for the two-engine vehicle to be eligible for the various BACT exemptions. To be eligible for the exemption available to large and

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medium fleets that have installed the highest level VDECS prior to January 1, 2013, both engines of the two-engine vehicle must be retrofitted if VDECS are available. A vehicle would, however, still qualify for the exemption if no highest level VDECS were available for one of the vehicle's engines but the other engine has been retrofitted prior to January 1, 2013. In this case, the horsepower from both engines must be counted towards the 15 percent exemption cap. If a fleet has already exceeded its 15 percent cap, the six year BACT exemption for the entire vehicle would still be available (see section 2449.1(b)(2)(C)).

If both engines have VDECS available, and the highest level VDECS is only installed on one of the engines, the entire vehicle will not be exempt from future BACT requirements; however, the engine with the highest level VDECS installed will still qualify for the six year BACT exemption (from the date of VDECS installation) as stated in section 2449.1(b)(2)(C).

For small fleets, a two-engine vehicle may be permanently exempt from the BACT requirements (see section 2449.1(b)(3)(E)), only if both engines have the highest level VDECS available installed. Similar to the provisions above for medium/large fleets, if only one engine of the two-engine vehicle has a highest level VDECS installed, the entire vehicle may still receive the BACT exemption as long as there is no VDECS available for the non-retrofitted engine. If both engines have VDECS available, and the highest level VDECS is only installed on one of the engines, the entire vehicle is not be exempt from future BACT requirements; however, the engine with the highest level VDECS installed still qualifies for the permanent BACT exemption (see section 2449.1(b)(3)(E)).

Q - How does the 'Rounding' provision in section 2449.1(b)(5) affect two-engine vehicles?

A - For purposes of the rounding provisions in section 2449.1(b)(5), if a two-engine vehicle is subject to the Off-Road regulation, neither engine in the two-engine vehicle is required to be turned over until the horsepower required to be turned over under the BACT requirements is at least half the sum of the combined horsepower of the primary and auxiliary engines in the two-engine vehicle.

Q – If my fleet was previously less than 20,000 horsepower (hp) statewide, and now, after adding the horsepower of my two-engine vehicles, the fleet hp exceeds 20,000 hp, is the fleet subject to the SOON program if all other applicable criteria are met?

A – No. Since this was a change that was made after the development of the SOON program (described in section 2449.2), you do not need to add in the hp from two-engine vehicles when determining SOON fleet applicability.

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Frequently Asked Questions In-Use Off-Road Diesel Vehicle Regulation

Private Fleet Size Determination and Reporting Requirements FAQ Revised May 2011

Q - Why is fleet size important in the In-Use Off-Road Diesel Vehicle Regulation?

A - Compliance requirements for ARB's off-road regulation vary for each fleet, and are determined based on the total off-road horsepower contained in the fleet. In the off-road regulation, there are three "fleet size categories": small, medium, and large; a fleet will have different reporting and compliance requirements depending upon their fleet category classification.

To determine the fleet size category, the horsepower of all mobile off-road vehicles under common ownership or control must be summed. Low-use vehicles, dedicated snow-removal vehicles, and vehicles used solely for emergency operations should not be included in this sum when determining the fleet size category.

Q - What do you mean by common ownership or control?

A - If vehicles are under common ownership, this means they are owned by the same person, corporation, partnership, or association. In addition, vehicles managed day to day by the same directors, officers, or managers, or by corporations controlled by the same majority stockholders are considered to be under common control even if their title is held by different business entities.

Q - How do private fleets determine their fleet size?

A - Vehicles owned by private companies determine their fleet size by adding up all the horsepower in their fleet. If a company has subfleets then the total fleet size is the sum of all horsepower for each subfleet.

Q - If a company has separate locations in California, can they comply and report fleets separately at different locations, or must the company to report/comply as a whole?

A - If a company has separate subfleets under the control of different responsible officials (fleet managers) because they are part of different subsidiaries, divisions, or other type of organizational structure, each

While this document is intended to assist fleets with their compliance efforts, it is the sole responsibility of fleets to ensure compliance with the In-Use Off-Road Diesel Vehicle Regulation.

subfleet can report and comply separately with the regulation. However, the total horsepower of the company must be determined by adding up the total horsepower under common ownership or control in order to determine the total fleet size, and subsequently, the first compliance date for the fleet. Fleets that have the same majority stockholders (over 50 percent) are considered to be under common control. For example, if one parent company is comprised of three 2,000 hp fleets (at different locations), since the total horsepower of the parent company (all the locations added together) is greater than 5,000 hp (a large fleet), each location can report/comply separately, but must comply with the large fleet targets. For information on how to report subfleets, please visit https://ssl.arb.ca.gov/ssldoors/doors_reporting/doors_login.html

Please see also the further examples below.

Example 1 – Parent/Child Company

XYZ Corporation (in California) forms a new, wholly owned corporation, South Coast Paving and Grading (in California), and secures a different federal tax identification number for it. While XYZ Corporation and South Coast Paving and Grading can report and comply separately with the regulation, because they are under common ownership, the total horsepower of both must be summed in order to determine the total fleet size, and subsequently, the first compliance date for both corporations' fleets.

Example 2 – Common Ownership

ABC Company and 123 Company are wholly-owned subsidiaries of Alphabet Group Incorporated. They were acquired by Alphabet Group Incorporated in 1950 and 1970, respectively. Alphabet Group Incorporated is located in Nevada, however ABC Company and 123 Company are both located in California and each have their own Federal Tax Identification numbers. In addition, they each have unique California State Contractor's license numbers. Both ABC and 123 are decentralized, with most of the decision making pushed down to the operating company level. However, the corporate office centralizes things like insurance, bonding, cash, and financial statement consolidation.

Because ABC and 123 are under common ownership, the total horsepower of this fleet must be determined by adding up all the horsepower for ABC and 123, which will determine the first compliance date for the fleet. However, ABC and 123 can report and comply separately with the regulation

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Example 3 – Common Control

Bill Brown owns Brown Construction and controls the day to day operation of his fleet. Bonnie Brown is the owner of Bonnie's Earthmoving, but her vehicles are controlled on a day to day basis by Mr. Bill Brown. Mr. Brown makes decisions regarding vehicle use, maintenance, purchases and sales, etc. Because Brown Construction and Bonnie's Earthmoving fleets are under the common control of Mr. Brown, their horsepower must be summed to determine their fleet size. If, for example, the summed horsepower is over 5,000 hp, both would need to meet the large fleet requirements.

Example 4 – 50/50 Ownership

John Smith owns Company A, and Jane Doe owns Company B. John and Jane also each both own 50 percent of Company C. Because neither John nor Jane have a majority stake in Company C (neither have more than 50 percent), as long as Company C is not under common control with either Company A or B, neither John nor Jane must add Company C's horsepower to their own when determining fleet size. Each fleet - Company A, B, and C - would report separately and determine its fleet size separately.

If, however, John controlled both the Company A and Company C fleet on a day-to-day basis (managing the vehicles' use, maintenance, purchases and sales, etc.), then Company A and Company C's horsepower would need to be combined when determining fleet size.

ARB enforcement may use organizational documents of fleet owners (such as articles of incorporation) to validate fleet ownership.

Q - What is a captive attainment area fleet?

A - Captive attainment area fleets are fleets or subfleets in which all of the vehicles operate exclusively within the following counties: Alpine, Colusa, Del Norte, Glenn, Humboldt, Lake, Lassen, Mendocino, Modoc, Monterey, Northern Sonoma, Plumas, San Benito, San Luis Obispo, Santa Barbara, Santa Cruz, Shasta, Sierra, Siskiyou, Trinity, Tehama, and Yuba. Captive attainment area fleets are treated as small fleets even if their total horsepower exceeds 2,500 horsepower.

While this document is intended to assist fleets with their compliance efforts, it is the sole responsibility of fleets to ensure compliance with the In-Use Off-Road Diesel Vehicle Regulation.

Q - What is a non-profit training center, and what is my fleet size if I qualify as this type of fleet?

A - A non-profit training center is an entity that operates a program for training in the use of off-road vehicles and that (A) is a community college program that trains students in the use of off-road vehicles or (B) qualifies as a non-profit or not for profit organization under title 26 Internal Revenue Code section 501(a), (c)(3), (c)(5), or (c)(6). Any vehicles that are not used for an off-road training program are not considered part of a non-profit training center and must be considered a separate fleet. Non-profit training centers are treated as small fleets even if their total horsepower exceeds 2,500 horsepower.

Q - Do low-use vehicles count towards the total hp of a fleet? Are low-use vehicles included when calculating hp to be turned over/retrofit under BACT?

A - Low-use vehicles should NOT be included when calculating a fleets' total horsepower, and should also not be included in the fleet average calculator, or any of the fleet average index or target calculations. Therefore, when calculating the horsepower necessary to meet the BACT requirements, low-use vehicles should not be included in the total horsepower, and should also not be "turned over" or retrofitted to meet the BACT requirements.

Q - My fleet's total horsepower is less than 500 hp. Do I still have to meet the small fleet requirements?

A - No. As an option, you can choose to phase out all of your fleet's Tier 0 and Tier 1 vehicles and replace them with Tier 2 or greater vehicles according to the phase-out schedule specified in section 2449(e), and shown below.

Optional Compliance Schedule for Fleets with 500 HP or Less

Compliance Date: January 1 of Year	Percent of Fleet (by horsepower) Which Must Have a Tier 2 or Higher Engine
2019	25
2022	50
2026	75
2029	100

While this document is intended to assist fleets with their compliance efforts, it is the sole responsibility of fleets to ensure compliance with the In-Use Off-Road Diesel Vehicle Regulation.

Frequently Asked Questions In-Use Off-Road Diesel Vehicle Regulation

Public Fleet Size Determination FAQ Revised May 2012

Q - Why is fleet size important in the In-Use Off-Road Diesel Vehicle Regulation (off-road regulation)?

A - Compliance requirements for ARB's off-road regulation vary for each fleet, and are determined based on the total off-road horsepower contained in the fleet. In the off-road regulation, there are three "fleet size categories": small, medium, and large; a fleet will have different reporting and compliance requirements depending upon their fleet category classification.

To determine the fleet size category, the horsepower of all mobile off-road vehicles under common ownership or control must be summed. Low-use vehicles, dedicated snow-removal vehicles, and vehicles used solely for emergency operations should not be included in this sum when determining the fleet size category.

Q - What do you mean by common ownership or control?

A - If vehicles are under common ownership or control, this means they are owned or managed day to day by the same person, corporation, partnership, or association. Vehicles managed by the same directors, officers, or managers, or by corporations controlled by the same majority stockholders are considered to be under common ownership or control even if their title is held by different business entities.

Q - How do Federal and State agencies determine their fleet size?

A - Vehicles owned by agencies of the United States and the State of California, or agencies thereof (i.e., an agency in the judicial, legislative, or executive branch of the federal or state government), must meet the large fleet requirements. In order to correctly calculate fleet requirements, federal agencies must report a Parent DOORS ID of 9 and State agencies must report a Parent DOORS ID of 10 on the 'Owner Information' page in DOORS.

Federal and state fleets may still comply and report as separate entities or as an identified fleet portion; however, they must still meet the large fleet requirements, regardless of total off-road horsepower in the fleet.

While this document is intended to assist fleets with their compliance efforts, it is the sole responsibility of fleets to ensure compliance with the In-Use Off-Road Diesel Vehicle Regulation.

- Q - Are school districts and universities exempt from the off-road regulation?**
- A - No. All school districts and public universities are subject to the off-road regulation. Please see the questions and answers below for more information on determining fleet size for these entities.
- Q - Are California state universities such as the University of California and State University campuses considered state fleets?**
- A - Yes. University of California (UC) and California State University (CSU) campuses are all considered state fleets under the off-road regulation. Therefore, UCs and CSUs that own off-road equipment affected by the regulation must report and comply with the large fleet requirements and deadlines, regardless of the total horsepower at each campus. Each campus may report and comply individually, as long as each campus meets the compliance requirements and deadlines for large fleets.
- Q - Are community colleges considered state fleets?**
- A - No. Community colleges are considered local municipal fleets. For more information on local municipal fleets, including reporting and compliance options, please see the answers to the questions below.
- Q - Are private universities considered state or public fleets?**
- A - No. Private universities are not considered state or public fleets. To determine the fleet size for a private university, please see the FAQ for private fleet size determination, located in the off-road Knowledge Center at: www.arb.ca.gov/msprog/ordiesel/knowcenter.htm
- Q - Are public school districts considered local municipal fleets?**
- A - Yes. Public school districts are considered local municipal fleets. For more information on local municipal fleets, including reporting and compliance options, please see the answers to the questions below.
- Q - Are private schools considered local municipal fleets?**
- A - No. Private schools are not considered local municipal fleets. To determine the fleet size for a private school, please see the FAQ for private fleet size determination, located in the off-road Knowledge Center at: www.arb.ca.gov/msprog/ordiesel/knowcenter.htm

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Q - What is a local municipality?

A - A “local municipality” means a city, county, city and county, special district, or other public agency, or two or more public entities acting jointly, or the duly constituted body of an Indian reservation or rancheria. Agencies of the United States of America or the State of California, and departments, divisions, public corporations, or public agencies of this State or of the United States are not considered local municipalities.

Q - How do local municipalities determine their fleet size?

A - For the purpose of determining the fleet size category of a local municipality, a municipality should first determine if it is a low-population county local municipality fleet (see below). Such fleets are considered small no matter what their horsepower. Then, local municipalities must consider that departments within a county or city or other local municipality are considered under common ownership and control because they are under the same management or “director”. Therefore, the total horsepower of all the departments must be summed to determine the overall fleet size category of small, medium, or large to be used for each department’s fleet*. The departments of a city or county or other local municipality can still report and comply separately; however, they must comply with the requirements of the fleet size category of the local municipality. For example, if the road maintenance department of a county was a small fleet, but the county overall contained over 5,000 hp (a large fleet), the road maintenance department could report and comply separately from the rest of the county fleets, but they would still have to meet the requirements of a large fleet beginning in 2014.

However, if a separate agency related to a city or county, such as a special district, has its own funding source and management, it would be considered a separate local municipality and fleet because it is not under common ownership or control with the city or county. A local municipal fleet of this type would determine its fleet size category based solely on the total horsepower in its fleet, and would not have to comply with the fleet size category requirements of the city or county in which it resides.

* This is different than how fleet ownership is handled in ARB’s Fleet Rule for Public Agencies and Utilities. Under that regulation, individual departments in a city or county can be completely separate fleets because the regulation’s provisions do not differ based on fleet size.

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Low-population local municipal fleets are treated as small fleets even if their total horsepower exceeds 2,500 horsepower.

To apply for the low-population county local municipality fleet status, or to obtain information on the Fleet Rule for Public Fleets and Utilities, please see ARB's website at:

www.arb.ca.gov/msprog/publicfleets/publicfleets.htm.

Q - What is a captive attainment area fleet?

A - Captive attainment area fleets are fleets or fleet portions in which all of the vehicles operate exclusively within the following 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, Trinity, Tehama, Yuba, and the portion of Sonoma County that lies within the boundaries of the North Coast Air Basin. Captive attainment area fleets are treated as small fleets even if their total horsepower exceeds 2,500 horsepower. Federal and State agencies cannot be considered captive attainment area fleets and must meet the large fleet requirements.

Q - What is a non-profit training center, and what is my fleet size if I qualify as this type of fleet?

A - A non-profit training center is an entity that operates a program for training in the use of off-road vehicles and that (A) is a community college program that trains students in the use of off-road vehicles or (B) qualifies as a non-profit or not-for-profit organization under title 26 Internal Revenue Code section 501(a), (c)(3), (c)(5), or (c)(6). Any vehicles that are not used for an off-road training program are not considered part of a non-profit training center and must be considered a separate fleet. Non-profit training centers are treated as small fleets even if their total horsepower exceeds 2,500 horsepower.

Q - My fleet's total horsepower is less than 500 hp. Do I still have to meet the small fleet requirements?

A - No. As an option, you can choose to phase out all of your fleet's Tier 0 and Tier 1 vehicles and replace them with Tier 2 or greater vehicles according to the phase-out schedule specified in section 2449(e), and shown below.

While this document is intended to assist fleets with their compliance efforts, it is the sole responsibility of fleets to ensure compliance with the In-Use Off-Road Diesel Vehicle Regulation.

Optional Compliance Schedule for Fleets with 500 HP or Less

Compliance Date: January 1 of Year	Percent of Fleet (by horsepower) Which Must Have a Tier 2 or Higher Engine
2019	25
2022	50
2026	75
2029	100

Q - Are public fleets responsible for reporting contractors' vehicles?

A - No. Every fleet owner is only responsible for the reporting and compliance of the vehicles they own. However, please note that for vehicles leased for more than one year, the lessee may be responsible for the reporting and compliance of those vehicles if it is stated as such in the lease or rental contract. For more information on rental/leased vehicles, please refer to the Rental/Leased Equipment FAQ which is located in the off-road Knowledge Center at: www.arb.ca.gov/msprog/ordiesel/knowcenter.htm.

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Frequently Asked Questions In-Use Off-Road Diesel Vehicle Regulation

Fleet Portions FAQ Revised May 2012

Q - What are Fleet Portions?

A - The In-Use Off-Road Diesel Vehicle Regulation (Off-road regulation) allows companies or agencies that have different divisions, subsidiaries, or other organizational structures to report all vehicles owned by the company as one fleet, or to report as individual **fleet portions** (i.e., smaller groups of vehicles). Fleets cannot divide into fleet portions arbitrarily; the divisions must correspond to a division fleet management, control, or location. Additionally, because a fleet's size is determined by the amount of horsepower under common ownership or control, reporting as multiple fleet portions does not allow the fleet to change fleet size categories. For example, if a large fleet (over 5,000 horsepower) decides report and comply as many smaller fleet portions, each fleet portion (regardless of how much horsepower is in the fleet portion) must still comply with the large fleet reporting and compliance requirements.

Q - Who can choose to report as fleet portions vs. one combined fleet?

A - Fleets cannot divide into fleet portions arbitrarily; the divisions must correspond to a division fleet management, control, or location. For example, a company that had two divisions under different management could report as fleet portions, even if the vehicles from the different divisions occasionally worked on the same jobsite together. Additionally, it is not required that different parts of the company or agency report and comply with the Off-road regulation separately as fleet portions; it is up to the fleet to decide whether or not to report and comply as one entity, or as fleet portions.

Q - How do I report and comply as a fleet portion?

A - Once a fleet is divided into fleet portions, each fleet portion must meet the requirements of the regulation individually, meaning that each fleet portion must report individually, and will have its own fleet averages and BACT requirements. BACT credits may not be traded between fleet portions. Additionally, fleet portions may "buy" and "sell" vehicles amongst themselves (e.g., transfer a vehicle from one location to another), only if the vehicle meets the adding vehicle requirements. For the fleet portion that "sells" a vehicle, BACT credit will be earned. Also, as stated above, each fleet portion must comply with the requirements determined by the overall fleet size of the entity, and not the individual size of the fleet portion.

While this document is intended to assist fleets with their compliance efforts, it is the sole responsibility of fleets to ensure compliance with the In-Use Off-Road Diesel Vehicle Regulation.

For more information on reporting fleet portions in DOORS, please see the DOORS user guide on How to Report Fleet Portions or Multiple Fleets, which is available in the Knowledge Center on the Off-Road regulation website at:
<http://www.arb.ca.gov/msprog/ordiesel/knowcenter.htm>.

Q - Can a fleet portion be designated as a captive attainment area fleet?

A - Yes. A captive attainment area fleet is a fleet or fleet portion in which all of the vehicles in the fleet or fleet portion operate exclusively within the following 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, Trinity, Tehama, Yuba, and the portion of Sonoma County that lies within the boundaries of the North Coast Air Basin. This means that if a fleet portion is a captive attainment area fleet, it is considered a small fleet, irrespective of the fleet's total horsepower.

For more information on captive attainment area fleets, please refer to the Fleet Size – Private Fleets and Fleet Size – Public Fleets FAQs, which are available in the Knowledge Center on the Off-Road regulation website at:
<http://www.arb.ca.gov/msprog/ordiesel/knowcenter.htm>.

Q - Can a State or federal fleet report and comply as a fleet portion?

A - Yes. Any State or federal fleet can report and comply as a fleet portion; however, all State and federal fleets must comply with the large fleet requirements (regardless of the fleet's total horsepower). Furthermore, every federal fleet must report (via DOORS) a Parent DOORS ID of 9 (located on the 'Owner Information' page) to indicate it is federal fleet, and every State fleet must list a Parent DOORS ID of 10 to indicate it is a State fleet.

Q - Can I report my fleet individually as fleet portions, but still comply as one whole fleet?

A - Yes. If a fleet wants to report each fleet portion individually, but wants to comply as a single entity, the fleet portions can be aggregated (i.e., added together) in DOORS. This means that the fleet is broken up into fleet portions for administrative/reporting purposes only in DOORS, and that all the fleet portions will be complying as a single fleet for compliance purposes. If fleet portions are aggregated in DOORS, the portions will still appear under separate DOORS IDs, but the overall fleet will have only one fleet average and one set of BACT requirements to meet (if the fleet portions comply individually, each portion will have its own fleet average and BACT requirements).

For more information on aggregating fleet portions in DOORS, please see the DOORS user guide on How to Report Fleet Portions or Multiple Fleets, which is

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available in the Knowledge Center on the Off-Road regulation website at:
<http://www.arb.ca.gov/msprog/ordiesel/knowcenter.htm>.

Q - If I am reporting my fleet as fleet portions, but complying as an aggregate fleet, can I transfer vehicles between my fleet portions?

A - Yes. If a fleet is reporting as fleet portions, but complying as an aggregate fleet, vehicles may be transferred (called “reassigned” in DOORS) between each fleet portion without penalty, meaning that the vehicle does not need to meet the adding vehicles requirements in order to be transferred. This is because no BACT credit is awarded for vehicles being transferred between fleet portions of aggregate fleets.

For more information on “reassigning” vehicles in DOORS, please see the DOORS user guide on Reassigning Vehicles, which is available in the Knowledge Center on the Off-Road regulation website at:
<http://www.arb.ca.gov/msprog/ordiesel/knowcenter.htm>.

Q - What are the benefits and disadvantages of reporting as fleet portions?

A - The practical benefit of reporting as fleet portions instead of one large fleet is that different divisions of a company or agency, or subsidiary companies of a corporation, do not have to communicate with each other to determine compliance with the Off-road regulation. They can manage their own fleet, and set up their own plan to replace, retire, or retrofit their vehicles.

However, this does provide less flexibility. For example, if one fleet portion does more than is required by the Off-road regulation, that fleet portion cannot give their BACT credit earned to another fleet portion; each fleet portion must comply with the Off-road regulation based on its own actions.

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Regulatory Advisory



April 2012

Mail-Out #MSC 12-08

NEW LABELING REQUIREMENTS FOR IN-USE OFF-ROAD DIESEL VEHICLES

EFFECTIVE JANUARY 1, 2013

The Air Resources Board (ARB) Regulation for In-Use Off-Road Diesel Vehicles (off-road regulation) became effective under California law on June 15, 2008. This regulation is intended to reduce harmful emissions from diesel powered vehicles operating in California. Among other things, fleet owners are required to report and label their vehicles. In December 2011, amendments to the off-road regulation became effective, including several new labeling requirements.

Labels Required on Both Sides for All Vehicles

As of 2009, vehicles subject to the off-road regulation were required to be reported to the ARB and labeled with a unique Equipment Identification Number (EIN) on the right side of the vehicle. All vehicles newly reported to ARB must now be labeled on both sides within 30 days of receiving the EIN, and all previously reported vehicles must be labeled on both sides by January 1, 2013.

Green Labels Required for Captive Attainment Area Fleets

There is also a new requirement for labels on vehicles owned by captive attainment area fleets. Because captive attainment area fleets are potentially subject to lesser compliance requirements than those fleets operating in surrounding areas (as described below), the labels on vehicles owned by captive attainment area fleets must be changed in order to differentiate them from other vehicles not eligible for this provision. The EIN labels for vehicles owned by captive attainment area fleets must now be white on a green background, rather than white on a red background. All captive attainment area fleets newly reported to ARB must now be labeled with green labels on both sides within 30 days of receiving the EIN. In addition, all previously reported vehicles in captive attainment area fleets must be labeled with green labels on both sides by January 1, 2013.

Captive Attainment Area Fleets are fleets or fleet portions in which all of the vehicles operate exclusively within the following 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, Trinity, Tehama, Yuba, and the portion of Sonoma County that lies within the boundaries of the North Coast Air Basin. Captive attainment area fleets are treated as small fleets even if their total horsepower (hp) exceeds the small fleet threshold of 2,500 hp.

Vehicles that fail to meet the new labeling requirements are subject to civil penalties for the violations as stated in section 39674 of the Health and Safety Code.

More information about how the labels must appear is available at www.arb.ca.gov/msprog/ordiesel/faq/faq-labeling.pdf.

A list of label vendors who can create EIN labels is online at www.arb.ca.gov/msprog/ordiesel/labelvendors.htm.

For information about the off-road regulation, including the regulation language, visit the website at: www.arb.ca.gov/ordiesel. The Knowledge Center contains many guidance documents which explain the regulation. For questions regarding off-road reporting, you may contact the DOORS hotline at (877) 59-DOORS [(877) 593-6677] or by email at doors@arb.ca.gov. For general questions about diesel regulations, you may contact the Diesel hotline at (866) 6-DIESEL [(866) 634-3735].

Frequently Asked Questions In-Use Off-Road Diesel Vehicle Regulation

Labeling FAQ Revised May 2011

Q – When will I receive my Equipment Identification Numbers (EINs) after initially reporting my fleet?

A – Fleets that have reported online through DOORS will receive their EINs immediately upon approval of their fleet. EINs are viewable by logging into your DOORS account and selecting “View EINs” from the drop-down menu.

Fleets that have reported via hardcopy forms will have their EINs mailed directly to them.

Q – Once I receive the ARB issued EINs, what are the requirements for labeling vehicles?

A – After receiving the EINs, fleets must label their vehicles within 30 days.

Fleet owners have a choice of how they want to label the vehicle itself. For example, some fleets may choose to label their vehicles with stickers, while others may paint the EIN on the vehicle.

The color of the EIN label is dependent on the type of fleet. Most EIN labels must be white on a red background. However, for captive attainment area fleets, the EIN labels must be white on a green background. Captive attainment area fleets are fleets or subfleets in which all of the vehicles operate exclusively within the following counties: Alpine, Colusa, Del Norte, Glenn, Humboldt, Lake, Lassen, Mendocino, Modoc, Monterey, Northern Sonoma, Plumas, San Benito, San Luis Obispo, Santa Barbara, Santa Cruz, Shasta, Sierra, Siskiyou, Trinity, Tehama, and Yuba

The EIN label must be located in clear view on both sides of the outside of the vehicle, approximately 5 feet above ground. If the vehicle is not 5 feet tall, the label may be placed lower on the vehicle. Each character of the EIN needs to be at least 3 inches tall and 1.5 inches wide. Furthermore, the EIN must be maintained in a manner that retains its legibility for the entire life of the vehicle.

The photographs below show real vehicles labeled with EINs.

While this document is intended to assist fleets with their compliance efforts, it is the sole responsibility of fleets to ensure compliance with the In-Use Off-Road Diesel Vehicle Regulation.



Q – Due to the previous labeling requirements, I only labeled the right (starboard) side of my vehicles. How long do I have to get both sides of my vehicles labeled?

A – Fleets have until January 1, 2013, to place an identical EIN label on the left (port) side of the vehicle.

Q – I am a captive attainment area fleet and my vehicles are labeled with EINs on a red background instead of green. How long do I have to change the EIN labels on my vehicles?

A – Captive attainment area fleets have until January 1, 2013, to change their EINs to green backgrounds and to label both sides of their vehicles.

Q – What if I do not have room on my vehicle to place the EIN? Should I place my EIN vertically?

A – Fleets are responsible to make every effort to find a place for the label of the appropriate size. However, if it is not possible – for example if there is physically not a surface that will hold the label horizontally on the right side of the vehicle - a fleet may use a smaller or vertical label. The fleet must make the label as close to the required size as possible in order for it to be legible to enforcement

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personnel. If ARB's enforcement staff finds labels that are smaller than required or placed vertically without a valid reason, the fleet will be subject to enforcement action. The use of smaller or vertical labels must be for a valid reason, for example, fleets cannot use smaller or vertical labels if there is no room because of existing optional stickers and/or placards on the vehicle. Furthermore, labels should not be placed on a portion of the vehicle that can be detached (for example, the backhoe attachment on a tractor). If you have any questions about labeling, you can contact ARB about your specific situation.

Q – What is the process for labeling added vehicles?

A – Once a vehicle has been added to a fleet that has been previously approved in DOORS, an EIN will automatically be assigned. The owner or responsible person has 30 days from then to appropriately label their equipment.

Q – Where can I buy labels?

A – For a list of label vendors who have demonstrated that they can meet the label specifications, please see our website at:
www.arb.ca.gov/msprog/ordiesel/labelvendors.htm

The listed vendors have provided a label to ARB meeting the specifications. However, please note that the listing of these companies does not constitute endorsement by the Air Resources Board.

While this document is intended to assist fleets with their compliance efforts, it is the sole responsibility of fleets to ensure compliance with the In-Use Off-Road Diesel Vehicle Regulation.



Enforcement Division

Advisory

To: Sellers of In-Use Off-Road
Diesel Vehicles in California

Number 378

December 2008
Revised May 2011

UPDATED DISCLOSURE/RECORD RETENTION REQUIREMENTS FOR DEALERS AND SELLERS OF IN-USE OFF-ROAD DIESEL VEHICLES EFFECTIVE 9/15/08

The Air Resources Board (ARB) has adopted a regulation for In-Use Off-Road Diesel Vehicles, which became effective under California law on June 15, 2008. This regulation is designed to reduce harmful emissions from diesel powered construction and mining vehicles operating in California. Fleet owners are subject to retrofit or accelerated replacement/repower requirements for which ARB must obtain authorization prior to enforcement from the United States Environmental Protection Agency under the federal Clean Air Act. In addition, this regulation also imposes notification and record keeping requirements on individuals and businesses who sell off-road diesel vehicles, which the ARB is authorized to enforce.

The disclosure requirements became effective as of June 15, 2008. ARB enforcement began conducting field audits beginning in mid-September 2008.

The regulation requires sellers in California of applicable off-road vehicles (self-propelled diesel-fueled vehicles 25 horsepower and up that were not designed to be driven on-road) to notify the buyer that the off-road diesel vehicle may be subject to retrofit or accelerated replacement/repower requirements. In addition, the seller must keep records of the disclosure notice for three years. The disclosure must be printed on the bill of sale or invoice. ARB encourages sellers to provide the disclosure **prior** to the sale so that the buyer can be aware of the regulation when making a buying decision.

If you have sold equipment on or after June 15, 2008 and did not include the disclosure, please contact all buyers and provide them with the disclosure. ARB enforcement may be inclined to reduce fines if you did not know about the disclosure requirements and made a good faith effort to inform buyers.¹

These requirements are specified in title 13, California Code of Regulations as follows:

§2449(j) Disclosure of Regulation Applicability:

Any person selling a vehicle with an engine subject to this regulation in California must provide the following disclosure in writing to the buyer on the bill of sale, "When operated in California, any off-

¹ For sales that occurred before September 15, 2008 and that did not include the disclosure on the invoice or bill of sale, ARB staff will not pursue enforcement action as long as the disclosure to the buyer was provided in writing before September 15, 2008.

road diesel vehicle may be subject to the California Air Resources Board In-Use Off-Road Diesel Vehicle Regulation. It therefore could be subject to 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/msprog/ordiesel/ordiesel.htm>.²

§2449(h)(8) Record Retention:

Each fleet owner shall maintain the records for each vehicle subject to the regulation until it is retired and of the overall fleet as long as the owner has a fleet or January 1, 2030, whichever is earlier. If vehicle ownership is transferred, the seller shall convey the vehicle records including vehicle data per section 2449(g)(1)(B), engine data per section 2449(g)(1)(C), and VDECS data per section 2449(g)(1)(D) to the buyer. If fleet ownership is transferred, the seller shall convey the fleet records including fleet data per sections 2449(g)(1)(A) through (H) to the buyer. Dealers must maintain records of the disclosure of regulation applicability required by Section 2449(j) for three years after the sale.

§2449(i) Right of Entry

For the purpose of inspecting off-road vehicles and their records to determine compliance with these regulations, an agent or employee of ARB, upon presentation of proper credentials, has the right to enter any facility (with any necessary safety clearances) where off-road vehicles are located or off-road vehicle records are kept.

Non-Compliance: Health and Safety Code, Section 39674 (a) authorizes civil penalties for the violation of the programs for the regulation of toxic air contaminants not to exceed one thousand dollars (\$1,000) for each day in which the violation occurs.

Health and Safety Code, Section 39674 (b) authorizes civil penalties for the violation of the programs for the regulation of toxic air contaminants not to exceed ten thousand dollars (\$10,000) for each day in which the violation occurs.

As a matter of policy, each first time violation of the disclosure/record retention requirements will be assessed a minimum civil penalty of \$500. Subsequent penalties can be up to \$1,000 to \$10,000. Daily fines will be assessed individually for every vehicle in violation. The standard for assessing penalties is one of strict liability. The seller will be responsible for the penalty.

For further information about the Off-road regulation, please visit our website at: www.arb.ca.gov/ordiesel. Fact sheets are available at www.arb.ca.gov/msprog/ordiesel/knowcenter.htm, and the full text of the regulation is available at www.arb.ca.gov/msprog/ordiesel/reqlanguage.htm.

For questions regarding enforcement of the Off-road regulation, please contact Mr. Eric Brown at (916) 323-0166 or ebrown@arb.ca.gov.

If you have questions about the Off-road regulation or our outreach efforts, please contact Ms. Kim Heroy-Rogalski at 916-327-2200 or kheroyro@arb.ca.gov.

² On May 1, 2008, the California Air Resources Board (ARB) mailed potential sellers of off-road vehicles a letter that identified disclosure language that must be provided in the bill of sale. Unfortunately, the last sentence of the disclosure language providing the website was omitted. The disclosure needs to contain all three sentences listed above.



Off-Road Regulation Advisory 12-02

ANNUAL REPORTING FOR THE IN-USE OFF-ROAD DIESEL VEHICLE REGULATION REQUIRED BY MARCH 1, 2012 FOR LARGE FLEETS

The Air Resources Board's (ARB) regulation for In-Use Off-Road Diesel Vehicles became effective under California law on June 15, 2008. This regulation is intended to reduce harmful emissions from diesel powered construction and mining vehicles operating in California. Among other things, fleet owners are subject to accelerated replacement/repower requirements, as well as restrictions on unnecessary idling.

Fleets were required to initially report their off-road diesel vehicles to ARB in 2009 via the Diesel Off-road On-line Reporting System (DOORS). As they buy or sell vehicles, fleets are required to notify ARB within 30 days.

Annual Reporting Deadlines

Beginning in 2012 for large fleets, 2016 for medium fleets, and 2018 for small fleets, fleets must annually update and affirm their reporting information is correct. This annual update is required by March 1 of each year and must include a signed statement, called a Responsible Official Affirmation of Reporting (ROAR), affirming that the fleet information reported is accurate and that the fleet is in compliance. **The first requirement for a ROAR is March 1, 2012 for large fleets (those with affected vehicles totaling over 5,000 horsepower).**

In addition to the ROAR, as part of their annual reporting, large fleets with low-use vehicles (those operating in California no more than 200 hours per year) must also report engine hour meter readings for those engines. Similarly, large fleets with vehicles used a majority of the time (but not solely) for agricultural operations must also report hours of use for those vehicles each year as part of their annual reporting.

Large fleets must submit a ROAR, low-use engine hours, and agricultural use hours each year from 2012 to 2023. Medium fleets must do so each year 2016 to 2023, and small fleets must do so each year from 2018 to 2028.

Using DOORS to Report

Within DOORS there are forms for fleets to use in order to submit their annual reporting, including screens to report low-use and agricultural vehicle hours. The ROAR form needs to be printed and signed by the responsible official, and mailed or e-mailed to ARB. Log into DOORS here:

https://ssl.arb.ca.gov/ssldoors/doors_reporting/doors_login.html

If a designee signs the affirmation of reporting, a written statement signed by the responsible official designating the designee must be attached to the affirmation of reporting and submitted to ARB. This

written statement designating the designee must only be attached the first time that designee signs the affirmation of reporting. This form is also available in DOORS.

If the responsible official or designee is the same for several fleets or fleet portions, the responsible official or designee has the option of submitting a single affirmation for these fleets, as long as the single affirmation appropriately identifies each fleet covered by the affirmation.

Penalties

Fleets that have not yet reported and are found to be in violation by enforcement personnel before they report themselves will be subject to enforcement action, including fines. Health and Safety Code, Sections 39674 (a) and (b) authorize civil penalties for the violation of the programs for the regulation of toxic air contaminants not to exceed **one thousand dollars or ten thousand dollars respectively for each day in which the violation occurs, which can be applied to each vehicle that is not reported.**

For More Information

For information about the Off-Road Regulation, visit the website at: www.arb.ca.gov/ordiesel. For questions regarding off-road reporting, you may contact the DOORS hotline at (877) 59-DOORS [(877) 593-6677] or by email at doors@arb.ca.gov. For general questions about diesel regulations, you may contact the Diesel hotline at (866) 6-DIESEL [(866) 634-3735].

Frequently Asked Questions In-Use Off-Road Diesel Vehicle Regulation

Reporting FAQ Revised May 2011

Q – I have completed my initial reporting. What are the reporting requirements after initial reporting?

A – As discussed in further detail below, fleets need to let ARB know within 30 days if they add or retire a vehicle.

Other than that, fleets need only update their reporting information annually on March 1st in the years indicated below:

- Large fleets (those with 5,000+ hp) must report annually each year from 2012 to 2023;
- Medium fleets (those with 2,501-5,000 hp) must report annually each year from 2016 to 2023;
- Small fleets (those with up to 2,500 hp) must report annually each year from 2018 to 2028.

When submitting their annual reporting, fleets must report any changes since the last annual reporting date and submit a compliance certification signed by the responsible official confirming that the information submitted is accurate and the fleet is in compliance with the regulation. Fleets must also submit their engine hour meter readings from January 1 and December 31 of the previous year if they wish to claim vehicles as low-use.

Q – When do I need to report to ARB if I add a vehicle to my fleet after the initial reporting deadline?

A – If you add a vehicle to your fleet (for example, by purchasing a vehicle or bringing one in from out of state), you must report that addition to ARB within 30 days of the purchase date or the date the vehicle is brought into California. For more information on how to report added vehicles, please see the DOORS User Guide at: https://ssl.arb.ca.gov/ssldoors/doors_reporting/doors_login.html

Q – When do I need to report to ARB if I sell or retire a vehicle after the initial reporting deadline?

A - On July 23, 2009, the Air Resources Board added a requirement for reporting the sale or retirement of an off-road vehicle within 30 days. Reporting sales in a timely manner will ease the reporting requirement for the fleet purchasing the

While this document is intended to assist fleets with their compliance efforts, it is the sole responsibility of fleets to ensure compliance with the In-Use Off-Road Diesel Vehicle Regulation.

vehicle. For information on how to report vehicles as sold or retired, please see the DOORS User Guide at:

https://ssl.arb.ca.gov/ssldoors/doors_reporting/doors_login.html

Q – I am a new fleet in California. When do I need to report my off-road vehicles to ARB?

A – If an entity obtains an affected vehicle for the first time or brings vehicles into California for the first time, the new fleet owner must report to ARB within 30 days of the purchase date or the date the vehicles were brought into California. For more information on what data is needed to complete reporting, please see our DOORS user guide at:

https://ssl.arb.ca.gov/ssldoors/doors_reporting/doors_login.html

Beginning the first January 1 that is more than 30 days after the date of purchase or the date the vehicles were brought into the state, new fleets must comply with the annual reporting requirements described above. For example, if a fleet of vehicles were purchased on December 15, 2010, the fleet would need to comply with the annual reporting requirements beginning January 1, 2012.

While this document is intended to assist fleets with their compliance efforts, it is the sole responsibility of fleets to ensure compliance with the In-Use Off-Road Diesel Vehicle Regulation.



Enforcement Division

Advisory

To: Owners, Operators, Renters
or Lessees of In-Use Off-
Road Vehicles in California

Number 377

June 2008
Revised May 2011

NEW IDLING LIMITS FOR OWNERS, OPERATORS, RENTERS OR LESSEES OF IN-USE OFF-ROAD DIESEL VEHICLES EFFECTIVE 6/15/08

The Air Resources Board (ARB) has adopted a regulation for In-Use Off-Road Diesel Vehicles (Off-road regulation), which became effective under California law on June 15, 2008. The Off-road regulation is designed to reduce harmful emissions from diesel powered construction and mining vehicles operating in California. Fleet owners are subject to retrofit or accelerated replacement/repower requirements for which ARB must obtain authorization prior to enforcement from the United States Environmental Protection Agency under the federal Clean Air Act. However, the Off-road regulation also imposes idling limitations on owners, operators, renters or lessees of off-road diesel vehicles, which the ARB is authorized to enforce.

The idling limits are effective and enforceable as of June 15, 2008. The Off-road regulation requires an operator of applicable off-road vehicles (self-propelled diesel-fueled vehicles 25 horsepower and up that were not designed to be driven on-road) to limit idling to no more than five minutes. These requirements are specified in title 13, California Code of Regulations as follows:

§2449(d)(2) Idling

The Idling limits in Section 2449(d)(2) shall be effective and enforceable immediately upon this regulation being certified by the Secretary of State. Fleets must meet the following idling limits.

(A) Idling Limit – *No vehicles or engines subject to this regulation may idle for more than 5 consecutive minutes. Idling of a vehicle that is owned by a rental company is the responsibility of the renter or lessee, and the rental agreement shall so indicate. The idling limit does not apply to:*

- 1. idling when queuing,*
- 2. idling to verify that the vehicle is in safe operating condition,*
- 3. idling for testing, servicing, repairing or diagnostic purposes,*
- 4. idling necessary to accomplish work for which the vehicle was designed (such as operating a crane),*
- 5. idling required to bring the machine system to operating temperature, and*
- 6. idling necessary to ensure safe operation of the vehicle.*

(B) Written Idling Policy – *As of March 1, 2009, medium and large fleets must also have a written idling policy that is made available to operators of the vehicles and informs them that idling is limited to 5 consecutive minutes or less.*

(C) Waiver – A fleet owner may apply to the Executive Officer for a waiver to allow additional idling in excess of 5 consecutive minutes. The Executive Officer shall grant such a request upon finding that the fleet owner has provided sufficient justification that such idling is necessary.

Therefore, waivers will be handled on a case by case basis. **Note:** idling beyond the 5-minute limit is permitted for the purpose of completing a diesel particulate filter (DPF) regeneration and subsequent “cool down” cycle under the section 2449(d)(2)(A)3. “testing, servicing, repairing or diagnostic purposes” of the rule. An individual waiver will not be required for this purpose.

§2449(i) Right of Entry

For the purpose of inspecting off-road vehicles and their records to determine compliance with these regulations, an agent or employee of ARB, upon presentation of proper credentials, has the right to enter any facility (with any necessary safety clearances) where off-road vehicles are located or off-road vehicle records are kept.

Non-Compliance: Health and Safety Code, Section 39674 (a) authorizes civil penalties for the violation of the programs for the regulation of toxic air contaminants not to exceed one thousand dollars (\$1,000) for each day in which the violation occurs.

Health and Safety Code, Section 39674 (b) authorizes civil penalties for the violation of the programs for the regulation of toxic air contaminants not to exceed ten thousand dollars (\$10,000) for each day in which the violation occurs.

As a matter of policy, each first time violation of the idling requirements will be assessed a minimum civil penalty of \$300. Subsequent penalties can be up to \$1,000 to \$10,000. The standard for assessing penalties is one of strict liability. The owner, renter or lessee will be responsible for the penalty.

ARB will assess daily penalties for each idling vehicle found to be in violation. "Idling inspections" will be conducted by our field staff by observing off-road vehicles at construction sites, mines or any other location where such vehicles operate. In case a vehicle is observed idling for more than five minutes, the operator and the site supervisor will be contacted to determine the reason for the idling and, if the reason for idling is not exempted by the rule, a \$300 per day of violation citation will be issued to the owner, renter or lessee of the vehicle for a first time violation.

For further information about the Off-road regulation, please visit our website at:

www.arb.ca.gov/ordiesel. Fact sheets are available at www.arb.ca.gov/msprog/ordiesel/knowcenter.htm, and the full text of the regulation is available at www.arb.ca.gov/msprog/ordiesel/reglanguage.htm.

For questions regarding enforcement of the Off-road regulation, please contact Mr. Eric Brown at (916) 323-0166 or ebrown@arb.ca.gov.

If you have questions about the Off-road regulation or our outreach efforts, please contact Ms. Kim Heroy-Rogalski at 916-327-2200 or kheroyro@arb.ca.gov.



Enforcement Division

Advisory

To: Owners, Operators, Renters
or Lessees of In-Use Off-
Road Vehicles in California

Number 391

February 2009
Revised May 2011

WRITTEN IDLING POLICY REQUIREMENTS FOR OWNERS OF IN-USE OFF-ROAD DIESEL VEHICLES EFFECTIVE 3/01/09

The Air Resources Board (ARB) has a regulation for In-Use Off-Road Diesel Vehicles (Off-road regulation), which became effective under California law on June 15, 2008. The Off-road regulation is intended to reduce harmful emissions from diesel powered construction and mining vehicles operating in California. Among other things, the Off-road regulation imposes idling limitations, which became effective as of June 15, 2008. The Off-road regulation also requires that medium and large fleets (those with over 2,500 horsepower of affected off-road vehicles) have a written idling policy and make it available to operators of such vehicles.

This written idling policy requirement is effective and enforceable as of March 1, 2009, and can be found in title 13, California Code of Regulations as follows:

§2449(d)(2)(B) Written Idling Policy

As of March 1, 2009, medium and large fleets must also have a written idling policy that is made available to operators of the vehicles and informs them that idling is limited to 5 consecutive minutes or less.

Non-Compliance: Health and Safety Code, Section 39674 (a) authorizes civil penalties for the violation of the programs for the regulation of toxic air contaminants not to exceed one thousand dollars (\$1,000) for each day in which the violation occurs.

Health and Safety Code, Section 39674 (b) authorizes civil penalties for the violation of the programs for the regulation of toxic air contaminants not to exceed ten thousand dollars (\$10,000) for each day in which the violation occurs.

As a matter of policy, fleets found to be missing the required written idling policy will be assessed a minimum civil penalty up to \$10,000 a day. Failure to submit a written idling policy within 30 days from the first offense will result in additional per day penalties. The standard for assessing penalties is one of strict liability.

An enforcement advisory concerning the idling limits is available at
www.arb.ca.gov/enf/advs/advs377.pdf

For further information about the Off-road regulation, please visit our website at:
www.arb.ca.gov/ordiesel.

Fact sheets and guidance documents, including suggested content of the written idling policy, are available at www.arb.ca.gov/msprog/ordiesel/knowcenter.htm, and the full text of the regulation is available at www.arb.ca.gov/msprog/ordiesel/reglanguage.htm.

For questions regarding enforcement of the Off-road regulation, please contact Mr. Eric Brown at (916) 323-0166 or ebrown@arb.ca.gov.

If you have questions about the Off-road regulation or our outreach efforts, please contact Ms. Kim Heroy-Rogalski at 916-327-2200 or kheroyro@arb.ca.gov.

Frequently Asked Questions In-Use Off-Road Diesel Vehicle Regulation

Emission Factors for Off-road Diesel, On-road Diesel, Alternative Fuel, and Gasoline-powered Vehicles FAQ Revised May 2011

Q – What emission factors do I use for off-road engines when calculating my fleet average?

A – Emission factors are based on the new engine NOx emission standards off-road engines met when they were manufactured (see Appendix A of the regulation for the emission factors table). The DOORS system and fleet average calculator looks up each engine’s emission factor and calculates fleet averages based on the individual engines in a fleet. To illustrate what factors these tools are using, the following table shows the emission factors from Appendix A of the regulation. The emission factor for an engine is determined by locating the row with the proper engine model year and column with the specified horsepower (See below for examples).

Emission Factors by Horsepower and Year (g/bhp-hr)								
Engine Model Year	Horsepower Group							
	25-49	50-74	75-99	100-174	175-299	300-599	600-750	Over 750
1900 – 1969	7.2	14.8	14.8	15.9	15.9	15.2	15.2	15.2
1970 – 1971	7.2	14.8	14.8	14.8	14.8	14.1	14.1	14.1
1972 – 1979	7.2	14.8	14.8	13.6	13.6	13.0	13.0	13.0
1980 – 1987	7.2	14.8	14.8	12.5	12.5	11.9	11.9	11.9
1988	7.1	9.9	9.9	9.3	9.3	8.9	8.9	8.9
1989 – 1995	7.1	9.9	9.9	9.3	9.3	8.9	8.9	8.9
1996	7.1	9.9	9.9	9.3	6.9	6.9	6.9	8.9
1997	7.1	9.9	9.9	6.9	6.9	6.9	6.9	8.9
1998	7.1	6.9	6.9	6.9	6.9	6.9	6.9	8.9
1999	6.2	6.9	6.9	6.9	6.9	6.9	6.9	8.9
2000	6.2	6.9	6.9	6.9	6.9	6.9	6.9	6.9
2001	6.2	6.9	6.9	6.9	6.9	4.2	6.9	6.9
2002	6.2	6.9	6.9	6.9	6.9	4.2	4.2	6.9
2003	6.2	6.9	6.9	4.3	4.3	4.2	4.2	6.9
2004	4.9	4.9	4.9	4.3	4.3	4.2	4.2	6.9
2005	4.9	4.9	4.9	4.3	4.3	4.2	4.2	6.9
2006	4.9	4.9	4.9	4.3	2.6	2.6	2.6	4.2
2007	4.9	4.9	4.9	2.6	2.6	2.6	2.6	4.2
2008	4.9	3.0	3.0	2.6	2.6	2.6	2.6	4.2
2009	4.9	3.0	3.0	2.6	2.6	2.6	2.6	4.2
2010	4.9	3.0	3.0	2.6	2.6	2.6	2.6	4.2
2011	4.9	3.0	3.0	2.6	1.5	1.5	1.5	2.6
2012	4.9	3.0	2.5	2.5	1.5	1.5	1.5	2.6
2013	3.0	3.0	2.5	2.5	1.5	1.5	1.5	2.6
2014	3.0	3.0	2.5	2.5	0.3	0.3	0.3	2.6
2015 and later	3.0	3.0	0.3	0.3	0.3	0.3	0.3	2.6

While this document is intended to assist fleets with their compliance efforts, it is the sole responsibility of fleets to ensure compliance with the In-Use Off-Road Diesel Vehicle Regulation.

The table below illustrates the emission factors for a few different model years and horsepower ratings. Each one is circled with a different color on the tables above.

Engine Model Year	Horsepower (Hp)	Emission Factor (g/bhp-hr)
1996 (Red)	150	9.3
2001 (Blue)	300	4.2
2003 (Green)	150	4.3

For more information on determining engine horsepower, please see the Engine Horsepower FAQ which is available in the off-road Knowledge Center at: www.arb.ca.gov/msprog/ordiesel/knowcenter.htm

Q - What are pre- and post-2007 flexibility (flex) engines, and what emission factor should I use for those engines?

A - Flexibility (flex) engines are engines that were produced by engine manufacturers to a less stringent emission standard after a new tier of emission standards goes into effect. The purpose was to provide equipment manufacturers with some lead time to redesign their equipment for the newer, more stringent, engines.

Pre-2007 flex engines are engines that were subject to the 2000 Plus Limited Test Procedures for new off-road diesel engines and have been certified to either Tier 1 or Tier 2 emission standards. Post-2007 flex engines are engines that are subject to the 2008 and Later Test procedures for new off-road diesel engines and are certified to Tier 2, Tier 3, or Tier 4 interim emission standards (depending on the year and engine power rating)..

All fleets must report whether or not an engine is flexed in DOORS. However, a fleet is not required to use the emission factor to which the engine is certified. Instead, a fleet should use the emission factor from Appendix A, as shown above, like it would for any other non-flexed vehicle in its fleet.

Q – What emission factor do I use if I have an on-road engine in my vehicle?

A – The regulation allows credit for repowering off-road vehicles with on-road engines. For on-road engines, the NOx standard to which the engine is certified is used as the emission factor. The on-road engine emission factors are shown in the table below.

While this document is intended to assist fleets with their compliance efforts, it is the sole responsibility of fleets to ensure compliance with the In-Use Off-Road Diesel Vehicle Regulation.

On-Road Heavy-Duty Diesel Emission Factors (g/bhp-hr)

Engine Model Year	Emission Factor (g/bhp-hr)
Pre-1979	-- ¹
1979	7.5
1980-1984	5.2
1985-1986	5.1
1987-1990	6.0
1991-1993	5.0
1994-1997	5.0
1998-2003	4.0
2004-2006	Use actual certification standard ²
2007+	Use actual certification standard ²

¹ For these model years, use the off-road emission factor for the purposes of compliance with the off-road regulation.

² Actual engine emission standards will vary. Phased in sales averaging 1.2 to 0.2 g/bhp-hr between 2007 and 2010 model years.

For an explanation of the benefits of on-road engines in off-road equipment, please see the On-road Engines in Off-road Vehicles FAQ, which is available in the off-road Knowledge Center at:

www.arb.ca.gov/msprog/ordiesel/knowcenter.htm

Q – What emission factor do I use if I have an alternative fuel or gasoline-powered vehicle operating in my fleet, or have repowered a diesel vehicle with an alternative fuel or gasoline-powered engine?

A – A fleet may include an alternative fuel or gasoline-powered vehicle that is 25 horsepower or greater (or that replaced a diesel vehicle 25 horsepower or greater) in the fleet average calculations, as specified in Section 2449(d)(1)(A), as long as its owner can demonstrate the following:

- (1) The vehicle serves a function and performs the work equivalent to that of a diesel vehicle and is used for a purpose for which diesel vehicles are predominantly used;
- (2) The vehicle is used predominantly outdoors;
- (3) The vehicle is not already included in the fleet average emission level requirements for large spark ignition engine fleets in title 13, Section 2775.1;

While this document is intended to assist fleets with their compliance efforts, it is the sole responsibility of fleets to ensure compliance with the In-Use Off-Road Diesel Vehicle Regulation.

- (4) Its engine is certified to a NOx standard less than or equal to the Tier 1 NOx standard for the same horsepower, and is less than or equal to the NOx emissions of a diesel engine of the same model year and horsepower; and
- (5) For a gasoline-powered vehicle, the owner must identify the diesel vehicle that the gasoline-powered vehicle replaced and maintain records documenting the function of the diesel vehicle replaced and the gasoline-powered replacement vehicle, and the dates of sale and purchase for both vehicles

For an alternative fuel or gasoline-powered vehicle, or a diesel vehicle that has been repowered with an alternative fuel or gasoline-powered engine, the emission factor must be obtained from the emission standard on the certification executive order. If the executive order lists an emission standard in terms of HC + NOx, the HC + NOx standard must be multiplied by 0.95 to get the emission factor. For example, in the executive order below, the HC + NOx standard of 3.0 g/bhp-hr (circled in the document) must be multiplied by 0.95 to get the emission factor.

 AIR RESOURCES BOARD	FORD MOTOR COMPANY	EXECUTIVE ORDER U-L-005-0021 New Off-Road Large Spark-Ignition Engines At & Above 25 Horsepower
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Pursuant to the authority vested in the Air Resources Board by the Health and Safety Code, Division 26, Part 5, Chapters 1 and 2; and

Pursuant to the authority vested in the undersigned by Health and Safety Code Sections 39515 and 39516 and Executive Order G-02-003;

IT IS ORDERED AND RESOLVED: That the following new large spark-ignition engines and emission control systems produced by the manufacturer are certified for use in off-road equipment as described below. Production engines shall be in all material respects the same as those for which certification is granted.

MODEL YEAR	ENGINE FAMILY NAME	ENGINE DISPLACEMENT (liters)	FUEL TYPE
2006	6FMXB04.2GAA	4.2	Gasoline, LPG, CNG, Gasoline-LPG Dual Fuel, Gasoline-CNG Dual Fuel, or LPG-CNG Dual Fuel
DURABILITY HOURS	SPECIAL FEATURES & EMISSION CONTROL SYSTEMS		TYPICAL EQUIPMENT USAGE
3500	Three-Way Catalytic Converters, Heated Oxygen Sensors, Sequential Multiport Fuel Injection		Forklift, Tractor/Tug, Generator, Sweeper, Aerial Lift, Other Industrial Equipment
ENGINE MODELS (rated power in horsepower, hp)	ESG642 [(Gasoline (143 hp), LPG (137 hp), NG (127 hp), CNG (127 hp))]		

The following are the hydrocarbon plus oxides of nitrogen (HC+NOx) and carbon monoxide (CO) exhaust certification emission standards (Title 13, California Code of Regulations, (13 CCR) Section 2433(b)(1)) and certification emission levels for this engine family in grams per brake horsepower-hour (g/bhp-hr). Engines within this engine family shall have closed crankcases in conformance with 13 CCR Section 2433(b)(2).

(g/bhp-hr)	HC+NOx	CO
Standards	3.0	37.0
Certification Levels	2.2	8.4

BE IT FURTHER RESOLVED: That for the listed engines for the aforementioned model-year, the manufacturer has submitted, and the Executive Officer hereby approves, the information and materials to demonstrate certification compliance with 13 CCR Section 2433(a) (certification and test

Emission factor = 3.0 x 0.95 = 2.85 g/bhp-hr.

If the alternative fuel vehicle or engine is not certified to a NOx emission standard, the owner may apply to the Executive Officer to use an appropriate

While this document is intended to assist fleets with their compliance efforts, it is the sole responsibility of fleets to ensure compliance with the In-Use Off-Road Diesel Vehicle Regulation.

emission factor. In the application, the owner must demonstrate that the chosen emission factor is appropriate and not exceeded by the alternative fuel vehicle.

Q – What emission factor do I use for a diesel fueled vehicle that has been converted to an alternative fueled or gasoline-powered vehicle?

A – The emission factor is the same as the emission factor for the diesel vehicle, as specified in section 2449(d)(1)(A)4..

Q - What emission factor and horsepower do I use if I have an electric vehicle?

A – A fleet may include an electric vehicle 25 horsepower or greater in the fleet average calculations, as specified in section 2449(d)(1)(B), as long as its owner can demonstrate the following:

- (1) The electric vehicle perform the work of a diesel vehicle and must be used for a purpose for which diesel vehicles are predominately used;
- (2) The electric vehicle must be used predominately outdoors; and
- (3) The electric vehicle cannot already be included in the fleet average requirements for large spark ignition engine fleets.

Electric vehicles should not be included when determining fleet size, or when calculating the required horsepower for the BACT requirements in section 2449.1(b)

For GSE electric vehicles purchased before January 1, 2007: For an electric vehicle that replaced a diesel vehicle in the owner's fleet, the maximum power of the diesel vehicle replaced may be used as the electric vehicle's horsepower. Otherwise, the electric vehicle's own maximum power rating should be used. When calculating the fleet average index and target rate, the fleet owner must multiply the vehicle's horsepower by 0.2, along with an emission factor of zero.

For non-GSE electric vehicles purchased before January 1, 2007: For an electric vehicle that replaced a diesel vehicle in the owner's fleet, the maximum power of the diesel vehicle replaced may be used as the electric vehicle's horsepower. Otherwise, the electric vehicle's own maximum power rating should be used. An emission factor of zero should be used for the electric vehicle.

For all electric vehicles purchased on after January 1, 2007: For an electric vehicle that replaced a diesel vehicle in the owner's fleet, the horsepower of the diesel vehicle replaced may be used as the electric vehicle's horsepower. For an electric vehicle added to the fleet that did not replace a diesel vehicle, the fleet owner may apply to the Executive Officer to use the horsepower of a diesel vehicle that serves the same function and performs equivalent work to that of the electric vehicle. If no request to the Executive Officer is received, the electric

While this document is intended to assist fleets with their compliance efforts, it is the sole responsibility of fleets to ensure compliance with the In-Use Off-Road Diesel Vehicle Regulation.

vehicle's own maximum power rating shall be used. An emission factor of zero should be used for the electric vehicle.

Double Credit for Electric in 2014-2016 - For compliance dates in 2014 through 2016, the horsepower of all electric vehicles purchased on or after January 1, 2007 may be doubled in determining the horsepower that is used in calculating the fleet average index. The horsepower of each electric vehicle is included but not doubled in the calculation of fleet average target rate.

Single Credit for Electric in 2017 and Later - For compliance dates in year 2017 and later, the horsepower of all electric vehicles purchased on or after January 1, 2007 is used in determining the horsepower that is used in calculating the fleet average index and target

Q - What emission factor and horsepower do I use if I replaced diesel vehicles with an electric portable or electric stationary system?

A - A fleet may apply to the Executive Officer to include electric portable or electric stationary systems that replace mobile diesel vehicles, such as an electric conveyor system used to replace diesel haul trucks at a mine, in the fleet average calculations as long as the owner can demonstrate:

- (1) That the system replaced an off-road diesel fueled vehicle subject to this regulation on or after January 1, 2007; and
- (2) The system is not already counted toward the fleet average emission level requirements for large spark ignition engine fleets in title 13, CCR, section 2775.1 or for portable diesel engine fleets in title 17, CCR, section 93116.3.

The system may be considered in the fleet average calculations by including the horsepower of the diesel vehicles replaced in the calculations of the fleet average index and target rate, along with an emission factor of 0.

Q - What emission factor and horsepower do I use if I have a hybrid off-road vehicle?

A - Fleets may include a hybrid off-road diesel vehicle 25 horsepower or greater in their fleet average index and target rate calculation. The emission factor for the hybrid vehicle is equal to the NO_x emission standard to which its engine is certified in g/bhp-hr. If a fleet owner wishes to use different emission factor, other than the standard to which the engine is certified, the owner may apply to the Executive Officer to use an alternative emission factor. The Executive Officer shall approve the alternative emission factor if, in the fleet owner's application, the owner demonstrates that the chosen emission factor is appropriate and not exceeded by the hybrid vehicle.

While this document is intended to assist fleets with their compliance efforts, it is the sole responsibility of fleets to ensure compliance with the In-Use Off-Road Diesel Vehicle Regulation.

Emission factors – How to reflect exhaust retrofits

Q – How do I determine what my new emission factors are if I have retrofitted my vehicle with a VDECS (i.e., an exhaust retrofit)?

A – The emission factor is adjusted down to reflect the emission reductions achieved by the VDECS.

The equation to determine the adjusted emission reduction is:

Emission Factor (Post VDECS) = Emission Factor (Pre VDECS) x VDECS Factor

The VDECS factor is calculated based on the type of VDECS placed on the vehicle. The VDECS factor table is located in section 2449.1(a) of the regulation, and is also shown below.

VDECS Factors

VDECS	VDECS Factor
No VDECS Installed or Level 1 VDECS	1
Level 2 PM VDECS, not highest level	0.82
Level 2 PM VDECS, not highest level, with NOx Reduction	1 Minus (0.18 + (Verified Percent NOx Reduction Divided by 170))
Highest Level PM VDECS	0.7
Highest Level PM VDECS with NOx Reduction	1 Minus (0.3 + (Verified Percent NOx Reduction Divided by 170))
NOx Reduction only	1 Minus (Verified Percent NOx Reduction Divided by 170)

For example, a 1998 engine with 200 hp has an emission factor of 6.9 g/bhp-hr. The equation below shows how the emission factor would be reduced with a Level 3 VDECS that achieves 60 percent NOx reductions:

Adjusted Emission Factor = [6.9] x [1 – (0.3 + 60/170)] = 2.39 g/bhp-hr

While this document is intended to assist fleets with their compliance efforts, it is the sole responsibility of fleets to ensure compliance with the In-Use Off-Road Diesel Vehicle Regulation.

The table below is an example fleet that has been retrofitted with VDECS. The before and after emission factors are listed for quick comparison.

Engine Model Year	Horsepower	PM VDECS?	NOx VDECS?	Emission Factor Before VDECS	Emission Factor After VDECS
1996	175	Yes, level 3	Yes, 65% reduction	6.9	2.19
1998	200	No	Yes, 60% reduction	6.9	4.46
2000	250	Yes, level 3	No	6.9	4.83
2003	300	Yes, level 2 (not highest level)	Yes, 50% reduction	4.2	2.21

Fleet Average Calculations

Q – How are fleet averages and fleet average targets calculated?

A – The DOORS system and fleet average calculator calculate fleet averages and fleet average targets for fleets that use these tools. However, if you wish to understand how fleet averages are calculated, the discussion below provides an explanation.

Fleet averages and fleet average targets are calculated using a series of equations and tables based on the size of the fleet. Large and Medium fleets will use the Large and Medium Fleet Targets tables in section 2449.1(a)(1), and small fleets will use the Small Fleet Targets table in section 2449.1(a)(2).

The equation below is for calculating a fleet’s average targets.

$$\text{Fleet Average Target} = \frac{\sum_{i=1}^n \text{MaxHp}_i \times \text{Target}_i}{\sum_{i=1}^n \text{MaxHp}_i}$$

Where *i* is the first engine and *n* is the number of engines in the fleet.

While this document is intended to assist fleets with their compliance efforts, it is the sole responsibility of fleets to ensure compliance with the In-Use Off-Road Diesel Vehicle Regulation.

Large and Medium Fleet Targets								
For Use in Calculating Fleet Average Target Rates [g/bhp-hr]								
	Targets for each Max Hp Group							
Compliance Date: January 1 of the Year	25-49 hp	50-74 hp	75-99 hp	100-174 hp	175-299 hp	300-599 hp	600-750 hp	>750 hp
2014 (Large Fleets Only)	5.8	6.5	7.1	6.4	6.2	5.9	6.1	7.2
2015 (Large Fleets Only)	5.6	6.2	6.7	6.0	5.8	5.5	5.6	6.8
2016 (Large Fleets Only)	5.3	5.8	6.2	5.5	5.3	5.1	5.2	6.5
2017	5.0	5.4	5.5	4.9	4.7	4.5	4.6	6.0
2018	4.7	5.0	4.8	4.3	4.1	4.0	4.0	5.5
2019	4.4	4.6	4.1	3.7	3.5	3.4	3.4	5.0
2020	4.1	4.2	3.4	3.1	2.9	2.8	2.9	4.5
2021	3.8	3.8	2.7	2.5	2.3	2.2	2.3	4.0
2022	3.5	3.4	2.0	1.9	1.7	1.7	1.7	3.5
2023	3.3	3.0	1.4	1.3	1.5	1.5	1.5	3.4

Small Fleet Targets								
For Use in Calculating Fleet Average Target Rates [g/bhp-hr]								
	Targets for each Max Hp Group							
Compliance Date: January 1 of the Year	25-49 hp	50-74 hp	75-99 hp	100-174 hp	175-299 hp	300-599 hp	600-750 hp	>750 hp
2019	5.8	6.5	7.1	6.4	6.2	5.9	6.1	7.2
2020	5.6	6.2	6.7	6.0	5.8	5.5	5.6	6.8
2021	5.3	5.8	6.2	5.5	5.3	5.1	5.2	6.5
2022	5.0	5.4	5.5	4.9	4.7	4.5	4.6	6.0
2023	4.7	5.0	4.8	4.3	4.1	4.0	4.0	5.5
2024	4.4	4.6	4.1	3.7	3.5	3.4	3.4	5.0
2025	4.1	4.2	3.4	3.1	2.9	2.8	2.9	4.5
2026	3.8	3.8	2.7	2.5	2.3	2.2	2.3	4.0
2027	3.5	3.4	2.0	1.9	1.7	1.7	1.7	3.5
2028	3.3	3.0	1.4	1.3	1.5	1.5	1.5	3.5

While this document is intended to assist fleets with their compliance efforts, it is the sole responsibility of fleets to ensure compliance with the In-Use Off-Road Diesel Vehicle Regulation.

The equation below is for calculating a fleet's Fleet Average Index.

$$\text{Fleet Average Index} = \frac{\sum_{i=1}^n \text{MaxHp}_i \times \text{EmissionFactor}_i}{\sum_{i=1}^n \text{MaxHp}_i}$$

The emission factors are shown in the tables below.

If the fleet's Fleet Average Index is less than or equal to the Fleet Average Target for a compliance date (i.e., January 1 of any compliance year), the fleet meets the fleet average requirements.

In cases where numerical rounding is necessary to determine compliance with the regulation, conventional (also known as standard) rounding procedures will be used. In such cases, the Fleet Average Index will be rounded to the same decimal place as the Fleet Average Target. The procedure for rounding will adhere to the standard mathematical method. The number will be rounded up if the first digit that is not included is a five or greater, and will be rounded down if the first digit that is not included is less than five. For example, given a fleet average target of 6.2 g/bhp-hr, a fleet's index of 6.2499 will be rounded down to 6.2, and the fleet would meet the requirements for that compliance date.

The example below demonstrates how to calculate the Fleet Average Index and Fleet Average Target. The Fleet Average Index and Fleet Average Target values are compared to determine whether or not the fleet is in compliance with the performance requirements.

While this document is intended to assist fleets with their compliance efforts, it is the sole responsibility of fleets to ensure compliance with the In-Use Off-Road Diesel Vehicle Regulation.

Emission Factors by Horsepower and Year (g/bhp-hr)								
Engine Model Year	Horsepower Group							
	25-49	50-74	75-99	100-174	175-299	300-599	600-750	Over 750
1900 – 1969	7.2	14.8	14.8	15.9	15.9	15.2	15.2	15.2
1970 – 1971	7.2	14.8	14.8	14.8	14.8	14.1	14.1	14.1
1972 – 1979	7.2	14.8	14.8	13.6	13.6	13.0	13.0	13.0
1980 – 1987	7.2	14.8	14.8	12.5	12.5	11.9	11.9	11.9
1988	7.1	9.9	9.9	9.3	9.3	8.9	8.9	8.9
1989 – 1995	7.1	9.9	9.9	9.3	9.3	8.9	8.9	8.9
1996	7.1	9.9	9.9	9.3	6.9	6.9	6.9	8.9
1997	7.1	9.9	9.9	6.9	6.9	6.9	6.9	8.9
1998	7.1	6.9	6.9	6.9	6.9	6.9	6.9	8.9
1999	6.2	6.9	6.9	6.9	6.9	6.9	6.9	8.9
2000	6.2	6.9	6.9	6.9	6.9	6.9	6.9	6.9
2001	6.2	6.9	6.9	6.9	6.9	4.2	6.9	6.9
2002	6.2	6.9	6.9	6.9	6.9	4.2	4.2	6.9
2003	6.2	6.9	6.9	4.3	4.3	4.2	4.2	6.9
2004	4.9	4.9	4.9	4.3	4.3	4.2	4.2	6.9
2005	4.9	4.9	4.9	4.3	4.3	4.2	4.2	6.9
2006	4.9	4.9	4.9	4.3	2.6	2.6	2.6	4.2
2007	4.9	4.9	4.9	2.6	2.6	2.6	2.6	4.2
2008	4.9	3.0	3.0	2.6	2.6	2.6	2.6	4.2
2009	4.9	3.0	3.0	2.6	2.6	2.6	2.6	4.2
2010	4.9	3.0	3.0	2.6	2.6	2.6	2.6	4.2
2011	4.9	3.0	3.0	2.6	1.5	1.5	1.5	2.6
2012	4.9	3.0	2.5	2.5	1.5	1.5	1.5	2.6
2013	3.0	3.0	2.5	2.5	1.5	1.5	1.5	2.6
2014	3.0	3.0	2.5	2.5	0.3	0.3	0.3	2.6
2015 and later	3.0	3.0	0.3	0.3	0.3	0.3	0.3	2.6

Fleet Average Calculation Example

Example fleet of 3 vehicles:

Vehicle 1: 1996, 100 hp, Emission Factor = 9.3

Vehicle 2: 2000, 200 hp, Emission Factor = 6.9

Vehicle 3: 2002, 300 hp, Emission Factor = 4.2

Fleet Average Index

$$= [(9.3 \times 100) + (6.9 \times 200) + (4.2 \times 300)] / (100 + 200 + 300)$$

$$= 6.0$$

While this document is intended to assist fleets with their compliance efforts, it is the sole responsibility of fleets to ensure compliance with the In-Use Off-Road Diesel Vehicle Regulation.

For 2014 compliance date:¹

Vehicle 1 (100 hp): Target = 6.4

Vehicle 2 (200 hp): Target = 6.2

Vehicle 3 (300 hp): Target = 5.9

Fleet Average Target:

= $[(6.4 \times 100) + (6.2 \times 200) + (5.9 \times 300)] / (100 + 200 + 300)$

= 6.1

Compare target with average:

Fleet Average Index = 6.0

Fleet Average 2010 Target = 6.1

6.0 < 6.1

Since the Fleet Average Index is less than the Fleet Average Target set for 2014, the fleet meets the performance requirement for 2014.

¹ The example uses the 2014 large fleet target rates, which apply only to large fleets (those with over 5,000 hp). To make the example shorter and easier to follow, we show the calculations for just three vehicles with a total horsepower of 600 hp. In reality, a fleet with total horsepower of 600 hp would be subject to the small fleet requirements.

While this document is intended to assist fleets with their compliance efforts, it is the sole responsibility of fleets to ensure compliance with the In-Use Off-Road Diesel Vehicle Regulation.

Responsible Official Affirmation of Reporting (ROAR) for Annual Reporting

By signing below, I, the responsible official, affirm that the information reported to ARB for the off-road fleet indicated below is accurate and the fleet is in compliance with the In-Use Off-Road Diesel Vehicle Regulation. The requirements that must be met in order for this affirmation to be valid are described in title 13, section 2449(g)(1) and (2).

For Captive Attainment Area Fleets Only:

Check box if applicable

I affirm that the vehicles in this fleet did not operate outside the captive attainment area, as defined by title 13, section 2449(c)(6)

DOORS Fleet ID #

Company/Agency Name

Name of Responsible Official or Designee

Job Title

Phone Number of Signatory

Email Address of Signatory

Signature of Responsible Official* or Designee**

Date

* Responsible Official means the **owner or partner** of a sole proprietorship or partnership, or a person who performs similar policy or decision-making functions for a corporation (i.e., **president, secretary, treasurer, vice president, or similar person in charge of a principal business function**). For a public agency, it means either a principal executive officer or ranking elected official (i.e., **chief executive officer** responsible for the overall operations of a principal geographic unit of the agency).

** To designate a different Responsible Official, you must also complete and submit the Designated Official form (on the next page).

Print and complete the form(s). Then, either scan the completed form(s) and email them to doors@arb.ca.gov, or mail the completed form(s) to:

Attention: Off-Road Diesel Reporting
MSCD, Mail Stop 5B
Air Resources Board
PO Box 2815
Sacramento, CA 95812

Designated Official

I, the responsible official*, designate the following person to be responsible for the affirmation of reporting required by title 13, section 2449(g)(2)(A) of the In-Use Off-Road Diesel Vehicle Regulation.

DOORS Fleet ID #

Company/Agency Name

Name of Responsible Official *

Job Title

* Responsible Official means the **owner or partner** of a sole proprietorship or partnership, or a person who performs similar policy or decision-making functions for a corporation (i.e., **president, secretary, treasurer, vice president, or similar person in charge of a principal business function**). For a public agency, it means either a principal executive officer or ranking elected official (i.e., **chief executive officer** responsible for the overall operations of a principal geographic unit of the agency).

Phone Number of Responsible Official

Email Address of Responsible Official

Signature of Responsible Official

Date

Name of Designee

Job Title

Signature of Designee

Date

Print and complete the form(s). Then, either scan the completed form(s) and email them to doors@arb.ca.gov, or mail the completed form(s) to:

Attention: Off-Road Diesel Reporting
MSCD, Mail Stop 5B
Air Resources Board
PO Box 2815
Sacramento, CA 95812

Request for a Change in DOORS Information: Contact Information

If you would like to change the contact name, email, phone number, user name, or password for your DOORS account, please fill out the following information and either scan the completed form and email it to doors@arb.ca.gov, fax to (916) 323-5526, or mail to:

ATTN: OFF-ROAD DIESEL REPORTING
 MSCD, Mail Stop 5B,
 Air Resources Board
 1001 I St. P.O Box 2815
 Sacramento, CA, 95812

 DOORS Fleet ID #

 Company/Agency Name

 Name of Responsible Official or Designee

 Job Title

 Phone Number of Signatory

 Email Address of Signatory

 Signature of Responsible Official or Designee

 Date

If you want to change an item below, please enter in the updated information in the space provided. If you do not want to update an item, please leave the space blank.

New Contact Name: _____

New Contact Email: _____

New Contact Phone Number: _____

New User Name: _____

New Password: _____

For questions regarding this form, please contact the Diesel Off-road Online Reporting System (DOORS) Hotline at: (877) 59DOORS (877-593-6677)

Information of the fleet/fleet portion being transferred:

DOORS Fleet ID # to be transferred: _____

Company/Agency Name: _____

Name/Contact Information of Fleet _____

(if known): _____

Date of fleet/fleet portion acquisition: _____

Other Required Information:

When a fleet/fleet portion is acquired, you have the option of choosing how the acquired fleet/fleet portion is incorporated into your existing fleet.

Option 1: Keep the acquired fleet/fleet portion under its current DOORS Fleet ID # (i.e., keep the acquired fleet/fleet portion as its own entity, separate from the other fleets/vehicles you may own), and have it assigned a new username and password. This means you will have a separate username and password for the newly acquired fleet. Please note that if you chose this option, credits previously earned by the acquired fleet/fleet portion will be transfer over to your fleet. For more information on fleet portions and transfer credits, please see the "Fleet Portions" FAQ which is available in the Off-road website's Knowledge Center at:

<http://www.arb.ca.gov/msprog/ordiesel/knowcenter.htm>

Option 2: Keep the acquired fleet/fleet portion under its current DOORS Fleet ID # (i.e., keep the acquired fleet/fleet portion as its own entity, separate from the other fleets/vehicles you may own), and have it assigned to your current username and password. This means that when you sign into your DOORS account under your current username and password, you will see the newly acquired fleet in addition to your current fleet(s). Please note that if you chose this option, credits previously earned by the acquired fleet will be transfer over to your fleet. For more information on fleet portions and transfer credits, please see the "Fleet Portions" FAQ which is available in the Off-road website's Knowledge Center at:

<http://www.arb.ca.gov/msprog/ordiesel/knowcenter.htm>

Option 3: Combine the vehicles of the acquired fleet with the vehicles you already own (i.e., the acquired fleet will no longer have its own DOORS Fleet ID #, and will instead have its vehicles incorporated with those you already own). Please note that if you chose this option, credits previously earned by the acquired fleet will not transfer over to your fleet. For more information on fleet portions and transfer credits, please see the "Fleet Portions" FAQ which is available in the Off-road website's Knowledge Center at:

<http://www.arb.ca.gov/msprog/ordiesel/knowcenter.htm>

For questions regarding this form, please contact the Diesel Off-road Online Reporting System (DOORS) Hotline at: (877) 59DOORS (877-593-6677)

Please circle which option you will be selecting, and then fill in the appropriate information below: Option 1 / Option 2 / Option 3

If you selected **Option 1**, please fill out the following information:

New username: _____

New password: _____

This will be the new username and password for the acquired fleet/fleet portion.

If you selected **Option 2**, please fill out the following information:

Current username: _____

Current password: _____

The acquired fleet will be moved to the DOORS account associated with your current username and password listed above.

If you selected **Option 3**, please fill out the following information:

DOORS ID of your
current fleet: _____

Current username: _____

Current password: _____

The vehicles of the acquired fleet will be moved to the DOORS account listed above.



Adding a Vehicle with an Existing EIN

If you purchased a vehicle that was previously registered in DOORS by another user and already has an existing Equipment Identification Number (EIN), this vehicle can be added to your fleet by entering the EIN on the "Enter Vehicle" page in DOORS. However, if the fleet selling the vehicle has not yet "sold" the vehicle from their DOORS account, the fleet purchasing the vehicle will not be able to enter in the vehicle via the EIN number (since an EIN can only exist in one fleet at time). The selling fleet has 30 days from the time of sale to remove the vehicle from their fleet, but if this does not occur, the purchasing fleet has two options: (1) Re-register the vehicle and receive a new EIN (which must replace the EIN currently labeled on the vehicle), or (2) fill out this form, including proof of purchase of the vehicle, and ARB staff will remove the vehicle from the selling fleet, and place it into the purchasing fleet.

If it has been **30 days** or more since the date of purchase, and you wish to have a vehicle with an existing EIN moved into your fleet, please submit this form, including applicable attachments listed below by scanning the completed form and emailing it to doors@arb.ca.gov, faxing to (916) 322-3923, or mailing to:

ATTN: OFF-ROAD DIESEL REPORTING
MSCD, Mail Stop 13A
Air Resources Board
1001 I Street, P.O. Box 2815
Sacramento, California 95812

DOORS Fleet ID Number

Company/Agency Name

Name of Responsible Official or Designee

Job Title

Phone Number of Signatory

Email Address of Signatory

Signature of Responsible Official or Designee

Date

For questions regarding this form, please contact the Diesel Off-Road Online Reporting System (DOORS) Hotline at: (877) 59DOORS (877-593-6677)



**In-Use Off-Road Diesel Vehicle Regulation
Request for a Change of DOORS Information**

If you want to have a purchased vehicle with an existing EIN moved into your fleet, please provide the information below.

Vehicle EIN: _____

Date of Vehicle Purchase: _____

Name/Contact Information
of Selling Fleet (if known): _____

Additionally, please attach a bill of sale, or other documentation to support proof-of-purchase of the vehicle. If this documentation is NOT included, this request will be rejected.



Vehicle/Engine Information of Previously Reported Vehicles

If you purchased a vehicle that was previously registered in diesel off-road online reporting system (DOORS) by another user (i.e., already has an EIN number), and would like to correct the vehicle and/or engine information that was **incorrectly** entered by the previous owner (and is locked for editing in DOORS), please submit this form, including applicable attachments listed below, by scanning and emailing it to doors@arb.ca.gov, faxing it to (916) 322-3923, or by mailing:

ATTN: OFF-ROAD DIESEL REPORTING
MSCD, Mail Stop 13A
Air Resources Board
1001 I Street, P.O. Box 2815
Sacramento, California 95812

DOORS Fleet ID Number

Company/Agency Name

Name of Person Requesting Change

Job Title

Phone Number

Email Address

Date

If you want to change the information of a vehicle or engine, please enter in the vehicle Equipment Identification Number (EIN), and then provide the updated information in the spaces provided. If you do not need to update an item, please leave the space blank. If you are trying to update a field that is not listed in the tables below, you do not need to fill out this form. Instead, please call the DOORS hotline for assistance in making the change.

Additionally, please attach a picture of the vehicle, engine label, or other documentation to support the need for the revisions listed below. If this documentation is NOT included, this request may be rejected.

For questions regarding this form, please contact the Diesel Off-Road Online Reporting System (DOORS) Hotline at: (877) 59DOORS (877-593-6677)

State of California Air Resources Board

Emission Factors (NOx) for Off-Road Diesel Engines by Model Year and Horsepower Group (g/bhp-hr)								
Engine Model Year	Horsepower Group							
	25-49	50-74	75-99	100-174	175-299	300-599	600-750	Over 750
1900 – 1969	7.2	14.8	14.8	15.9	15.9	15.2	15.2	15.2
1970 – 1971	7.2	14.8	14.8	14.8	14.8	14.1	14.1	14.1
1972 – 1979	7.2	14.8	14.8	13.6	13.6	13.0	13.0	13.0
1980 – 1987	7.2	14.8	14.8	12.5	12.5	11.9	11.9	11.9
1988	7.1	9.9	9.9	9.3	9.3	8.9	8.9	8.9
1989 – 1995	7.1	9.9	9.9	9.3	9.3	8.9	8.9	8.9
1996	7.1	9.9	9.9	9.3	6.9	6.9	6.9	8.9
1997	7.1	9.9	9.9	6.9	6.9	6.9	6.9	8.9
1998	7.1	6.9	6.9	6.9	6.9	6.9	6.9	8.9
1999	6.2	6.9	6.9	6.9	6.9	6.9	6.9	8.9
2000	6.2	6.9	6.9	6.9	6.9	6.9	6.9	6.9
2001	6.2	6.9	6.9	6.9	6.9	4.2	6.9	6.9
2002	6.2	6.9	6.9	6.9	6.9	4.2	4.2	6.9
2003	6.2	6.9	6.9	4.3	4.3	4.2	4.2	6.9
2004	4.9	4.9	4.9	4.3	4.3	4.2	4.2	6.9
2005	4.9	4.9	4.9	4.3	4.3	4.2	4.2	6.9
2006	4.9	4.9	4.9	4.3	2.6	2.6	2.6	4.2
2007	4.9	4.9	4.9	2.6	2.6	2.6	2.6	4.2
2008	4.9	3.0	3.0	2.6	2.6	2.6	2.6	4.2
2009	4.9	3.0	3.0	2.6	2.6	2.6	2.6	4.2
2010	4.9	3.0	3.0	2.6	2.6	2.6	2.6	4.2
2011	4.9	3.0	3.0	2.6	1.5	1.5	1.5	2.6
2012	4.9	3.0	2.5	2.5	1.5	1.5	1.5	2.6
2013	3.0	3.0	2.5	2.5	1.5	1.5	1.5	2.6
2014	3.0	3.0	2.5	2.5	0.3	0.3	0.3	2.6
2015 and later	3.0	3.0	0.3	0.3	0.3	0.3	0.3	2.6

Tier 0 Engine*	
Tier 1 Engine	
Tier 2 Engine	

Tier 3 Engine	
Interim Tier 4	
Tier 4 Engine	

* Tier 0 is uncontrolled, built before emissions standards were in effect.

More information about Off-Road Diesel Regulations may be found at www.arb.ca.gov/diesel