

UPDATED INFORMATIVE DIGEST

MODIFICATIONS TO THE REGULATION FOR IN-USE OFF-ROAD DIESEL-FUELED FLEETS

Sections Affected

Proposed amendments to California Code of Regulations, title 13, 2449(c)(26), 2449(c)(39), 2449(e)(6), 2449(e)(8), 2449(g), 2449.1(a)(2)(A), 2449.2(a)(2)(A), 2449.2(a)(2)(A)1., and 2449.2(a)(2)(A)2.a., the Regulation for In-Use Off-Road Diesel-Fueled Fleets (off-road regulation or regulation).

Background

The Off-Road Regulation as Adopted in July 2007

At its July 26, 2007, public hearing, the Air Resources Board (Board or ARB) approved the off-road regulation with the adoption of California Code of Regulations, title 13, sections 2449 through 2449.3. The off-road regulation is intended to significantly reduce emissions of diesel particulate matter (PM) and oxides of nitrogen (NOx) from over 150,000 off-road diesel vehicles that operate in California. The reductions are necessary to meet State and federal ambient air quality standards and support the Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles, which was adopted by the Board on September 30, 2000. To achieve the required reductions, the off-road regulation requires fleet owners to accelerate turnover to cleaner engines and install exhaust retrofit devices. The regulation was approved by the Office of Administrative Law (OAL) and filed with the Secretary of State on May 16, 2008. It became operative on June 15, 2008.

Applicability

The fleet requirements of the off-road regulation apply to any person, business, or government agency who owns or operates within California any diesel-fueled or alternative diesel fueled off-road compression ignition vehicle engine with maximum power of 25 horsepower (hp) or greater that is used to provide motive power in a workover rig or to provide motive power in any other motor vehicle that (1) cannot be registered and driven safely on-road or was not designed to be driven on-road, and (2) is not an implement of husbandry or recreational off-highway vehicle. With the exception of two-engine cranes and two-engine water well drilling rigs (both of which have auxiliary engines covered by the regulation), the off-road regulation only addresses engines that propel vehicles (i.e., it does not apply to stationary equipment or portable equipment like generators).

Fleet Requirements

In general, the off-road regulation requires owners to modernize their fleets by replacing engines with newer, cleaner ones (repowering), replacing vehicles with newer vehicles equipped with cleaner engines, retiring older vehicles (without replacement), operating higher emitting vehicles less often (designating them as low-use vehicles) or by applying exhaust retrofit devices that capture and destroy pollutants before they are emitted into the atmosphere. The regulation determines the date of compliance and the actions required based on the size of the fleet, splitting fleets into three categories: large fleets with over 5,000 horsepower, medium fleets with 2,501 to 5,000 horsepower, and small fleets with 2,500 horsepower or less.

Performance requirements must be met by March 1 of each year, as follows:

- Large fleets: 2010-2020
- Medium fleets: 2013-2020
- Small fleets: 2015-2025

To meet the PM and NO_x emission reduction requirements, fleets¹ have the option of meeting fleet average emissions targets, or meeting the Best Available Control Technology (BACT) requirements. The PM BACT requirements consist of installing retrofit devices that have been approved by ARB as verified diesel emission control strategies (VDECS) on a certain percent of the fleet's maximum horsepower in each year of compliance. To meet the NO_x BACT requirements, large and medium fleets must turn over a certain percent of their maximum horsepower in each year of compliance.

To encourage fleets to take early actions to reduce emissions and to allow fleets to spread out the cost of compliance during the early years of the regulation, the off-road regulation provided fleets with credits for taking the following early compliance actions before March 1, 2009:

- Repowering vehicles, including replacing Tier 0 engines with Tier 1 engines;
- Retiring Tier 0 vehicles at an average rate greater than eight percent of total fleet horsepower per year during the period from March 1, 2006 to March 1, 2009;
- Installing VDECS that have been verified as achieving NO_x reductions on their vehicles; and
- Double credit for installing VDECS that have been verified as achieving PM reductions on their vehicles.

Subsequent Amendments

On December 12, 2008, the Board approved two minor amendments to the off-road regulation as part of the rulemaking that considered adoption of the In-Use Heavy-Duty

¹ Large and medium fleets have to meet both the PM and NO_x performance requirements. Small fleets are only required to meet the diesel PM requirements.

Diesel-Fueled Vehicles Regulation (truck and bus regulation). The amendments to the off-road regulation clarified the regulation's low-use provisions and expanded coverage of the regulation to include both the propulsion and auxiliary engines of two engine cranes. These amendments were approved by OAL and filed with the Secretary of State on October 3, 2009. The amendments became operative on the on December 3, 2009.

On January 22, 2009, the Board approved several additional amendments to the off-road regulation. First, it extended the deadline for fleet owners to obtain double PM credits for installing exhaust retrofit devices. The deadline was extended by ten months to January 1, 2010. The extension also allowed fleets to obtain double credits if they ordered retrofits by September 1, 2009, but could not install them by January 1, 2010, because of manufacturer delays. The extension provides fleets with additional time to accrue double PM retrofit credits, which will facilitate later compliance. The Board also approved several other minor modifications and clarifications to the regulation. These amendments were approved by OAL and filed with the Secretary of State on December 31, 2009. The amendments became operative on January 1, 2010.

On January 28, 2010, the Board approved one minor amendment to the off-road regulation as part of the rulemaking to consider amendments to the Portable Equipment Registration Program (PERP) Regulation, the Portable Engine Air Toxic Control Measure (ATCM), and the truck and bus regulation. This amendment will subject two-engine water well drilling rigs to the off-road regulation, and exempt them from the Portable Engine ATCM and truck and bus regulation. OAL approval of these amendments is presently pending.

Legislatively Directed Changes

In February 2009, the California Legislature enacted AB 8 2X (codified at Health and Safety Code section 43018.2), in which it directed ARB to make several changes to the regulation as set forth below. Although the changes allow some fleets to delay compliance, the directives of AB 8 2X did not repeal or delay general implementation of the off-road regulation. The directives included:

1. Fleets that experience reduced activity of their off-road vehicles between July 1, 2007 and March 1, 2010, may take credit for this reduced fleet activity to satisfy the turnover and retrofitting requirements of the regulation in 2010 and 2011.
2. Fleets will be given credit (for both PM and NOx) for any vehicle retirements made between March 1, 2006, and March 1, 2010, provided that total fleet horsepower has decreased.
3. For the total cumulative turnover and retrofit requirements for the years 2011 through 2013, fleets may complete 20 percent of those requirements by March 1, 2011, an additional 20 percent by March 1, 2012, and the balance by March 1, 2013.

The AB 8 2X amendments were formally adopted by the ARB Executive Officer on December 3, 2009, and became operative on that date as the amendments were expressly exempted from review under the Administrative Procedures Act.

Description of the Regulatory Action

New Provisions to Mitigate Loss in Emission Benefits

Because the AB 8 2X amendments will lessen the requirements for many large fleets in the early years of the regulation, without mitigation, the changes could result in:

- A loss in emission reductions that were anticipated to be achieved in 2014 (a key milestone year for the State Implementation Plan).
- A reduction in forecasted health benefits.
- A severe economic impact on retrofit device manufacturers and installers that have invested in the anticipation of implementation of the off-road regulation that could adversely impact their ability to have product available for compliance in future years, as well as a potentially significant loss of “green” jobs.

Therefore, to address the potential impacts from the AB 8 2X amendments, the Board amended the sections described below.

Exempt Vehicles that Have Been Retrofitted Early from Future Turnover

The Board amended section 2449.1(a)(2)(A)4. to allow fleets to claim a limited exemption from future turnover if they install a highest level PM VDECS prior to March 1, 2011. This credit is intended to provide an incentive for fleets to install retrofit devices earlier than they otherwise would have and thereby achieve immediate PM reductions. This change is purely voluntary, so it would impose no additional requirements on fleets. The Board limited the exemption by capping the number of vehicles for which a fleet can claim the exemption; this will effectively mitigate potential long-term effects.

Double Credit for NOx Retrofits

The Board similarly amended section 2449.1(a)(2)(A)2.a. to allow fleets to claim double credit for NOx retrofits installed by March 1, 2011. Staff recommended this double credit because it would help mitigate the potential loss in NOx emission reductions from the AB 8 2X amendments by providing an incentive for early NOx reductions. This change is also voluntary, so it will not impose any additional requirements on fleets.

Repower Credit

The Board amended section 2449.1(a)(2)(A)2.b. to allow fleets to accumulate NOx carryover turnover credit for repowers installed, even if such repowers do not exceed eight percent of a fleet's total horsepower. This change is intended to encourage large fleets to pursue repowers in 2010 and 2011 even if the new credits (established by the

AB 8 2X amendments) would otherwise allow them to comply in those years with no additional turnover. It is also intended to encourage medium fleets to pursue repowering in the years prior to their 2013 initial compliance date.

Extended Double Retrofit Credit for Small and Medium Fleets

The Board amended section 2449.2(a)(2)(A)2.a.ii., to provide double PM credit for small and medium fleets that install highest level VDECS on their vehicles prior to March 1, 2012. The double PM credit could be used by fleets to satisfy their PM BACT requirements in future years. This credit could potentially provide an incentive for small and medium fleets to install retrofit devices earlier than they otherwise would have and achieve early PM reductions. Taking advantage of this new double credit is voluntary and will also not impose any additional requirements on fleets.

Other Minor Clarifications and Modifications

The Board also made several minor clarifications and modifications to the regulation, including the following:

Definition of Forest Operations

The Board amended section 2449(c)(26), the definition of “forest operations,” to clarify that public agency fire prevention activities are covered by the definition. Thus, vehicles used solely for such activities are considered to be used for agricultural operations and are exempt from the off-road regulation. Previously, such activities (which include installing fuel breaks, firebreaks, and fire hazard abatement) were defined as forest operations only if they were “for commercial purposes.” Such activities if undertaken by a public agency were not covered. To provide equity and to avoid discouraging public agencies from undertaking fire prevention, the Board expanded the definition of forest operations to include such activities, whether they are performed by a public agency or private entity.

Including Community College Training Programs as Non-Profit Training Centers

The Board amended the definition of “non-profit training center” in section 2449(c)(39) to include community college programs that train students in the use of off-road vehicles. Previously, the definition in section 2449(c)(39) applied only to entities qualifying as a non profit or not for profit organization under Title 26 Internal Revenue Code sections 501(a), (c)(3), (c)(5), or (c)(6). Since adoption of the regulation, staff learned that community colleges operate training programs similar to those included in the definition of Non-Profit Training Center, but that the college programs were not covered under the above Internal Revenue Code definitions. This caused an inequity because under the off-road regulation non-profit training center fleets are considered small fleets and are provided more time to comply with the PM requirements and exempt from the NOx provisions, regardless of their total horsepower. The Board concluded that community college training programs should be extended this flexibility

for the same reason it was extended to other non-profit training centers, namely that they have little opportunity to raise the money needed to pay for compliance, and that their equipment is relatively low-use.

Compliance Extension for Installer Delays

The Board amended section 2449(e)(6) to clarify that the section applies to installer delays as well as manufacturer delays, both of which are beyond the fleet owner's control. Hence, a fleet owner who has purchased an engine or VDECS in order to comply with this regulation, will be excused from immediate compliance if the engine or VDECS is not been installed in time due to installer delays as long as the engine or VDECS was purchased at least four months prior to the compliance date.

VDECS That Impairs Safe Operation of Vehicle

The Board amended section 2449(e)(8) to clarify that a retrofit installation may be determined unsafe if it would make compliance with any federal or State agency safety requirements technologically infeasible. Fleet owners may currently request and the Executive Officer will find that a VDECS not be considered the highest level VDECS available if its use would make compliance with occupational safety and health requirements, mining safety and health requirements, or an ongoing local air district permit condition, technologically infeasible. The regulation was amended to clarify that fleets may also make that same request if use of a VDECS would conflict with any other federal or State agency safety requirements. For example, if use of a VDECS would cause a ground support equipment fleet at an airport to be unable to meet Federal Aviation Administration (FAA) safety requirements, the fleet could request, and the Executive Officer will find, that the VDECS not be considered highest level VDECS.

The Board also clarified that when the regulation specifies findings of a responsible federal or state agency, it means the findings of a federal or state agency that promulgates safety requirements.

Reporting Vehicle Sales

The Board amended section 2449(g) to clarify that fleets must report to ARB within 30 days of selling a vehicle. Section 2449(f)(1) already required that fleets report within 30 days of purchasing a vehicle or bringing it into California. To enable fleets to cleanly add vehicles that they have been purchased from another fleet and for the vehicles to maintain their Equipment Identification Numbers, it was necessary for fleets to also report sales in the same time frame.

Turnover Rate

The Board amended section 2449.1(a)(2)(A)1. to clarify that fleets that are not subject to turnover requirements in 2012, including fleets that qualify for a turnover exemption under section 2449.1(a)(2)(A)5 (e.g., fleets comprised solely of Tier 1 and higher

vehicles), are not required to meet the 14.4 percent turnover rate in 2013 that applies, in general, to large fleets that did not meet the NOx fleet average target in 2011 or 2012. To avoid inadvertently penalizing fleets that were not subject to turnover requirements in 2012, including those that have phased out their oldest, dirtiest engines (i.e., fleets qualifying for the section 2449.1(a)(2)(A)5 exemption), they will be treated like medium fleets and those large fleets that have met the NOx fleet average target in 2012, and will be subject to the original eight percent per year turnover rate.

The Board also amended this section to clarify that the NOx BACT turnover rate increases from eight to ten percent per year beginning in the 2016 compliance year (i.e., a fleet would be required to turn over ten percent of its fleet horsepower between March 1, 2015 and March 1, 2016 to fulfill the March 1, 2016 NOx BACT compliance requirements). Due to an error in the regulatory documents for the AB8 2X amendments, section 2449.1(a)(2)(A)1. mistakenly indicated the ten percent per year turnover rate would start in 2015 (a year early).

Order of Turnover

The Board amended section 2449.1(a)(2)(A)3. to clarify that fleets can obtain NOx credit for VDECS verified to reduce NOx emissions that are installed on an engine, irrespective of the engine's tier. To ensure that fleets phase-out their oldest, dirtiest engines first, the regulation previously restricted fleets from obtaining NOx credit for the turnover of higher tier engines until all Tier 0 and Tier 1 engines that are not subject to PM emission standards were turned over. This order of turnover was intended to apply only to fleets that turn over vehicles to comply with the regulation's NOx performance requirements and not to fleets that elect to comply by installing NOx VDECS. The Board, however, determined that NOx reductions achieved through use of VDECS on older, dirtier engines are also beneficial and should be encouraged.

PM Retrofit Rate

The Board amended section 2449.2(a)(2)(A)1. to clarify that fleets that are not subject to retrofit requirements in 2012 are not required to meet the 36 percent retrofit rate in 2013 that applies, in general, to large fleets that elected to but that did not meet the PM fleet average target in 2011 or 2012. To avoid inadvertently penalizing fleets that were not subject to retrofit requirements in 2012, such fleets are now subject to the presently operative 20 percent per year retrofit rate.

Comparable Federal Regulations

The U.S. Environmental Protection Agency (U.S. EPA) has promulgated federal emission standards for new non-road (off-road) engines. However, no federal standards have been promulgated addressing emission reductions from in-use diesel vehicle engines.

Under section 209(e)(2), California may adopt and enforce emission standards and other requirements for off-road engines and equipment not expressly subject to federal preemption, so long as California applies for and receives authorization from the Administrator of U.S. EPA. California's request for authorization was submitted on August 12, 2008. On October 27, 2008, and April 14, 2010, the U.S. EPA conducted hearings regarding California's request for authorization for the off-road regulation. The request is presently pending.